



The
**MODERN
HOSPITAL**

Vol. XXXVI

MARCH, 1931

No. 3



Call off the Bucket Brigade

CARRYING pails of water is not an adequate way to fight a fire . . . nor to clean hospital floors. The possibility of a fire . . . or the every day necessity of cleanliness . . . demands up-to-date equipment. For floor cleaning, that means the *Finnell System*.

Hospitals as a group, constitute one of the largest *Finnell* customers. Hospitals must be up-to-date . . . not only in their medical and surgical equipment, but also in their maintenance methods. Their position in the community, their responsibility to their patients demand it.

The *Finnell System* is a complete system . . . of waxing . . . polishing . . . scrubbing. There are nine different models . . . one to suit your needs and priced to fit your budget. The size of your building . . . the floor area and type . . . the extent to which you wax and scrub . . . all have a bearing on the system you should use. *Finnell* is the one system giving you so wide a range.

Investigate Now. A *Finnell* representative will be glad to make a survey of your floor maintenance needs and recommend a system economical for you . . . and demonstrate if you wish. If you are now a *Finnell* user, be sure to have a demonstration of *Finnell-Kote*. Address *Finnell System, Inc.*, 1403 East Street, Elkhart, Indiana.

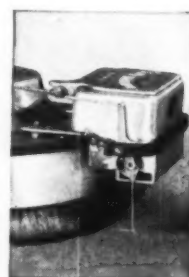


Eight sizes—to suit every need

This is a medium sized *FINNELL*, usable on any floor surface. Large enough for efficient work on large areas. Small enough for economical use in small hospitals.

Caution—The selection and installation of a modern floor cleaning or polishing equipment is much more than the simple procedure of buying a machine. *Finnell* manufacture a right size for each requirement and fit the installation to the conditions found.

FINNELL -KOTE



The New One-Operation Method of Waxing-Polishing

Finnell-Kote is a highly condensed form of wax—requiring hot application by means of a special dispenser unit, which can be attached to any of the *Finnell* models. *Finnell-Kote* is melted and applied to the floor, distributed immediately by the brushes . . . and an instant later can be brought to a beautiful polish by running the brushes again over the area. Saves half the cost of wax and takes but a fraction of the time. A *Finnell-Kote* Dispenser will be gladly loaned to any user of a *Finnell* machine.



THE MODERN HOSPITAL



A Monthly Journal Devoted to the Construction, Equipment, Administration and Maintenance of Hospitals and Sanatoriums.

VOL. XXXVI

March, 1931

NUMBER 3

What Has Been Achieved at Montefiore Through Modernization

By MORRIS HINENBURG, M.D.

and

JACOB GOODFRIEND

Assistant Directors, Montefiore Hospital, New York City

THE hospital world has always known that the decision between modernizing and building anew has some relation to the availability of funds. Two years ago, when these alternatives were put on the scale, the balance was in favor of new construction. To-day, when money is less plentiful, hospital executives must try to do the best they can with what they have, and improve their institutional facilities to make them more adaptable to community needs.

Hospital executives, architects and builders, no matter how highly they may be endowed with the ability to look into the future, can hardly hope to construct the perfect hospital—one that will be completely adaptable for the physical life of the building. Through experience accumulated over a long period of years with hospitals of many kinds, they may construct buildings that could be taken as models for the standards of their generation, but if they have not applied the principle of flexi-

bility in planning, the hospital generally will not last much longer than the weakest link in its construction chain without large expenditures for remodeling. In the first place, many factors influence the construction and equipment of the hospital, and the modifications brought by time can be taken into account during remodeling, if the buildings lend themselves to changes that become necessary.

Without attempting to weigh the possibilities further, we shall describe some of the changes that were made in the course of the modernization program of Montefiore Hospital, New York City.

The method of studying the problem was to survey the needs of the hospital according to (a) the buildings and (b) their equipment. Specifically, this involved the overhauling of the mechanical apparatus throughout the "circulatory system," as well as structural changes, to meet the needs of our patient groups. The equipment had

to be brought up to date. A study was made of the needs of the institution as compared with a number of the newer hospitals. The literature, of course, had been carefully studied. In many respects the task was more interesting than the planning of a new hospital. It certainly aroused a considerable amount of enthusiasm on the part of the staff, who were given every opportunity to make suggestions as the program was developed.

Engineering Department Supervised Changes

Most of the changes in our program were accomplished under the supervision and control of our engineering department by a crew of specialized workers, who were engaged on an extra-budgetary basis and paid from funds that had been specially collected for the execution of the program. This crew was kept apart from the routine repair group and careful records kept of the expenditures and work accomplished.

A study of the existing facilities and equipment in our institution revealed much that was obsolete and no longer desirable. Some of the older equipment was decidedly out of date and in many instances could be replaced by simpler apparatus less expensive to maintain. Repairs had become too frequent and replacement of parts difficult because the equipment, though partially serviceable, in many instances had outlived the manufacturer. Our maintenance costs were relatively high, while now, with the completion of our modernization program, we are hoping to get a return of more than 10 per cent on our modernization investment through savings in maintenance.

Our hospital is one of the few hospitals for chronics in America and consists of thirteen separate buildings, most of which are connected by overground and underground corridors. The hospital has a capacity of 633 beds. It was transferred seventeen years ago to a section of the city which, at that time, was almost uninhabited. During the years that followed, apartment houses multiplied in the vicinity and now the populated city extends much farther north and surrounds the area of the hospital. This has resulted in a number of obvious advantages over the early years. In the early days, however, the incurable (custodial) patient occupied most of our bed space and the advantages of isolation were therefore emphasized when the ground was bought. Now that the hospital has evolved into an institution for the active treatment of the chronic sick, the change in the environment has brought many benefits. A country sanatorium¹ with a capacity of 220 beds is maintained at Bedford Hills, N. Y.

¹An Unusual Example of Modern Sanatorium Construction, THE MODERN HOSPITAL, March, 1930, p. 67.

Ward space and other facilities had been planned to accommodate patients suffering largely from incurable diseases, most of them requiring a minimum amount of nursing and medical attention. Diagnostic and therapeutic facilities were available in limited measure. Our examining rooms, pantries, lavatories, bathrooms and utility rooms were provided in accordance with the standards of the day, but they were hardly adequate when the community need brought about a reorganization of the hospital for the admission of long term cases who could be benefited by active medical and nursing attention. As the institution changed its character, certain alterations in structure and equipment became obligatory. Our repair bills grew progressively larger. These circumstances, combined with the rapid improvement in hospital equipment generally, seemed to justify our program of modernization. With such a program, facilities of the latest type could be made available for our patients and the hospital brought up to date.

Our hospital buildings had a profusion of brass and other bright metals. After a careful study, we found that the polishing of these metals consumed the full time of three porters, a tax on the budget which we felt was not justified in a hospital that must depend for its support on voluntary contributions. Most of the brass in our hospital was in the form of door knobs, door plates, kick plates, push button plates, hinges, door checks, fire extinguishers, metal connections on fire hose, grilled tops of radiator covers, some table tops and covers, metal work on refrigerators, lift handles on windows, electric fixtures (ceiling, wall and desk) and emergency gas fixtures, besides equipment made of other metals. We had a few brass beds, which needed an occasional dose of metal polish. Aside from the waste in time, money and energy in keeping our brassware bright, we found that the metal polish would, in many instances, corrode the structure to which the metal was attached, such as fire hose. Moreover, in the case of the fire extinguishers, the brass color was not sufficiently attractive to the eye in case of danger.

Economy, the Guiding Principle

For all of these reasons we decided to abandon the polishing of metal and substitute a method of painting, oxidizing or plating, which we felt would add to its appearance, in no way detract from its efficiency and yet lower the cost of maintenance. In coming to the decision on this subject we were guided by the same general principles that underlay the program. Every effort was made to eliminate lost motion, merge positions in the institu-

tion that could be combined without impairing the efficiency of any department, adopt modern labor saving devices, conserve material and eliminate waste, including food, light and power in any form.

The general color schemes for the various departments of the hospital, the wards, dormitories, offices and corridors were radically changed and in every instance a soft ivory cream or light cream color was used to replace the gloomy battleship gray, the severe orange and dismal oak, popular in a former day, that gave the hospital a cheerless and somewhat depressed appearance. The new colors, properly shaded, were blended to make the surroundings bright and cheerful. Particular attention was given to the corridors and rooms having a northern exposure, and in these locations the use of these colors was even more successful. The hospital furniture—beds, dressers, chairs, bedside tables, nurses' desks, patients' lockers, cabinets, stretchers and carts—were painted a darker shade of the color used in the room. Discolored black slate toilet partitions were refinished to resemble grained marble, thus giving them an appearance of cleanliness that had not been possible formerly, despite the best efforts of the housekeeping department to keep them clean.

The window trim, the doors and other woodwork throughout the institution were either treated as the furniture had been or else the natural color was restored, depending on the quality of the wood and the combination of colors that would bring about the best appearance. Iron stairway railings, window sills and some of the baseboards were painted a deep chocolate color to give a uniform appearance, which would have been impossible with the earlier irregular discoloration. This color blended into a sunny tan dado with a cream wall above. The selection of a color scheme that is not only appropriate in appearance for a certain location but durable as well is an art that can readily be acquired by any person who has a sense of color and who is sympathetic toward the needs of the sick.

The painting of the outside of the hospital—porches, doors, window trim, fences, fire escapes, park benches, steamer chairs and waste recepta-

cles—was formerly done routinely in white or light gray, in an effort to conform with the colonial scheme of architecture. Our experience showed that with the first rainstorm that followed the painting, dark streaks would appear to mar the white color. Painting had to be done twice a year.

In our modernization scheme an olive green color was adopted and as matters now stand we shall make a considerable saving in our painting bill, besides achieving an equally good color effect. Painting to maintain the colonial color scheme, which had no esthetic advantages over the summery green color we adopted, had to be done at least five times more often, with a proportionately higher tax on our maintenance budget. The green paint was applied a year ago and is as good as new to-day and as pleasing to the eye. It goes without saying that all necessary repairs should precede the painting of any part to avoid subsequent patching and dabbing.

A careful study of the relative cost of painting done by outside contractors and by members of our own staff under similar conditions was made, and we found that not only could the work be done with less expense by our own staff but that, with careful oversight, the work was better.

Our paint spraying machinery and other painting apparatus were removed from the basement of one of our buildings to the roof of one of the buildings where there was practically no fire hazard. For this purpose frame penthouses were erected under conditions approved by the fire underwriters. Incidentally, we achieved better ventilation in this department as an additional safeguard for the comfort of employees who are engaged in this work.

The fire fighting apparatus of the hospital, such as alarm boxes, water hose attachments of sprinkler systems and chemical fire extinguishers, mostly of polished brass, were painted a brilliant scarlet, so that they now stand out prominently and are easily located in case of fire. At the same time we have succeeded in reducing the cost of maintenance. Our equipment was completely modernized. Modern boxes replaced the old glass covered units and new fire hose replaced the hose that was tested and found to be wanting. Fire

"The object of Montefiore's modernization program has been to bring every part of the hospital up to date and incidentally thereby to reduce maintenance costs through greater efficiency in operation. Changes have been made only after careful study and planning. Every effort has been made to eliminate lost motion, to merge positions that may be combined without impairing the efficiency of any department, to adopt modern labor saving devices, to conserve material and to eliminate waste, including food, light and power in any form."

alarm directories in prominent black type, enclosed in scarlet frames, were attached to the wall close to the apparatus in all the buildings, and a significant line was added at the bottom of the list of signals reading as follows: "In case of fire or smoke do not lose your head."

During fire drills or, in the event of actual danger, the local fire crew and all others concerned are instantly able to determine the source of the alarm. Fire drills are held periodically and we now have an organized fire fighting force of sixty men and women who can be depended upon to assemble at the location of the alarm within one to two minutes after the first gong is sounded. This force is regularly instructed in the use of the fire extinguishers and in the steps to be taken in case of actual fire. At this point we should like to add that our hospital is of modern fire resistive construction and we regard the fire hazard as very slight indeed. However, the danger from small conflagrations, and more particularly from smoke, in an institution that houses the sick must always be kept in mind and adequate precautions taken by the administration.

The metal parts of our exposed plumbing fixtures were nickel plated in our own plant. The metal parts of the shower baths that were installed on every floor of our hospital under the modernization scheme were chromium plated at the factory before they were installed. This was done at a somewhat higher initial cost, but in the expectation of economy in maintenance. For the concealed plumbing we know now that we would have done much better if, in the beginning, when the hospital was erected, we had used brass piping, which has a comparatively longer life and a lower maintenance cost. When replacements are made, therefore, brass is now used. A limited amount of metal polishing still remains to be done on articles that come in contact with heat, such as, for example, copper coffee urns and copper steam table tops, but these will eventually be replaced with a more serviceable metal of the noncorrosive family.

Push plates, kick plates, electric outlet plates and fixtures and metal hand rails, which also serve as bumpers in the eleven elevators of the hospital, were oxidized to a bright bronze finish in a plating plant of our own establishment. This we found to be an economy. This plant is now completely

equipped for nickel and silver plating as well as for general oxidizing. The actual cost of plating is comparatively small and the output represents a considerable improvement over past practices. Plating eliminates the necessity for repeated polishing, and even on those articles that do heavy duty, replating may not be necessary for many years. For a time after these changes were made, we experienced difficulty with a number of over-conscientious porters, who, through force of habit, insisted on spending hours in rubbing oxidized metal in order to recover the original luster.

Not all metal equipment was plated. In some instances the metal parts of electric fixtures and the brass beds of a former generation were painted to conform with the color scheme of the room in which they were used. The cost of painting is naturally less than the cost of oxidizing or plating, and this method was used when there was no real need for a plated product.

Whether an article is to be oxidized, plated or painted depends on its size, location and on the amount of usage it will receive. For example, a kick plate should be oxidized, while knives and forks should be nickel or silver plated. The inside of a metal elevator, if not attractive (some of them, like ours, were of an old dark color) should be painted a cheerful color with a spraying

machine, while a desk lamp can be either plated, painted or oxidized with good effect, to conform with the surrounding equipment and the general color scheme of the room in which it is to be used. On the other hand, a door check or door hinges may be refinished with ordinary bronze paint, which is economical.

At strategic points along the lines of communication, especially at crossroads and on stairway landings, the walls were lettered over an arrow indicating direction for the guidance of those not accustomed to the locations of our departments. This eliminated the confusion that attended the search for a patient,

an employee or a department in former days and replaced the unsightly framed guides that were sparsely scattered throughout the hospital. Direction signs were also made for the outdoors. These have been found to be convenient in directing delivery men, ambulance drivers and those who seek the chapel and the visiting and the main entrances. This work was done in our hospital by a letterer who was engaged on a monthly basis, a method that

"Hospitals must advance with the times. If they are not flexible enough to be permanently adjustable to changing conditions, they should be abandoned altogether and replaced by institutions in keeping with the requirements of the day. The hospital of the last generation is seldom suited to the scientific purposes of the hospital of the present generation."

proved to be far more economical than the older practice of turning the work over to an outside sign painter.

The letters inside the hospital are in black on the cream background of the corridor walls. It is expected that our improved wall paint will last as long as the lettering, since a much better quality, possessing more durable properties, has been found and will be more economical for use in our painting program. Yellow lettering, sometimes shaded in black, was used on the red mahogany background, and white lettering on oak panels in corridors that were not well lighted. On some of the lavatories that happened to be conspicuously placed along the main lines of communication we found it desirable to use inconspicuous small letters on the door, above the door knob. For the lavatories for men, one-inch letters, "Men," and for the lavatories for women, "Women" in the same kind of type were used. This is preferable to the large centrally placed lettering that is so common in public buildings. The scare head type of lettering should, of course, be avoided. The best way to letter the mortuary door is with the words: "Private—Please Keep Out."

Another trick in lettering was to place the words "Don't Waste Light" over the electric push button plates in important locations, and "Don't Waste Water" in blue paint on the white tile over bathtubs in a similar manner. The cost of valuable fuel to provide energy that is wasted by carelessness has never been calculated but is acknowledged to be high. Fancy lettering was avoided, plain block lettering being used throughout. In those locations of the hospital, such as the utility rooms, pantries, kitchens and lavatories, where the rooms are tiled to a height of about six feet, a blue border line was drawn to separate the tile from the cream or ivory wall above, thus breaking the monotony of the color scheme and providing, in fact, a touch of color. This was part of the work of the man who did the lettering.

How the Lighting Was Improved

Through a mistaken idea of economy and a desire not to break with tradition, antiquated lighting fixtures, which are still popular in hospitals, were maintained at a comparatively high cost for illumination, a cost that could have been reduced considerably by more appropriate fixtures. The ceiling fixtures were of the opaque variety, fitted with lamps of low wattage and hung close to the ceiling, thus diminishing the area of the reflecting surface. Under our program these fixtures were replaced by the translucent type of fixture, which was suspended from the ceiling to permit eight feet of clearance from the floor and

fitted with lamps of power appropriate to the location. This change not only improved the lighting efficiency but permitted the removal of approximately half the number of fixtures with a considerable ultimate reduction in the consumption of fuel in the power plant. The old type of push button switch, which in many instances controlled a series of lights with a single button, was replaced by a key switch under the control of responsible persons, who are definitely assigned to the task. Clear glass electric bulbs are frosted in our power plant, when needed, at considerable saving, and a locking device has been adopted to keep the bulbs in place.

The Ventilating System

The present ventilating system consists of a series of ducts running vertically and horizontally, connected to main ducts opening on to the attic of the buildings. The circulation of air through these ducts is created by a series of steam heated pipes set in vertical ducts, and coils in the plenum chamber, in the roof space. As the air is heated, the elements cause the air to rise in the ducts, with the movement of air started at the register face in the rooms. The circulation is set up through the doors, and apparatus is provided to admit fresh air, relieving the room of any offensive or undesirable odors. This system of ventilation, untouched and unregulated for years, has been found inadequate to provide sufficient artificial ventilation. The one redeeming feature is its comparative inexpensiveness, the cost being that of the consumed steam. This, however, is merely wasted in such a system.

A well planned motorized system of properly regulated velocities, through registers calculated to supply a certain number of complete changes of air per hour in the rooms, can be operated both economically and efficiently. The amount of air that passes through the system can be controlled satisfactorily by increasing or decreasing the speed of the motor fan.

Certain confined spaces such as clothing and supply closets have been adequately ventilated by boring holes into the upper and lower panels of the doors or cutting an inch from the top of the door. Grilled metal louvers have been placed in panel form on other doors, this latter method being the most effective in providing ventilation for such spaces.

As part of the plan of physical modernization, the wards were completely overhauled, particular attention being paid to color schemes, illumination and the proper distribution of space and equipment. The various features of this plan are too numerous to be described in detail, but a few of

the outstanding items are given in the following paragraphs.

Cubicles: The demand for single and double rooms for separation purposes in a chronic hospital is as great as the demand in an acute general hospital, where about 25 per cent of the patients require absolute privacy. Patients who are newly admitted to the general wards feel keenly the lack of privacy. To meet these demands, we decided to install curtained cubicles so designed that a single curtain in most instances, and at other times two curtains, will completely enclose the patient, giving him a modicum of privacy during such times as this is required. Medical and nursing care—examinations and treatment—may now be carried out within this semi-isolated compartment without the aid of portable sectional screens or elaborate examination rooms. There are other obvious benefits from the patients' point of view. This plan affords the additional advantage of enabling the staff to carry out certain procedures on the patient without offending the sensibilities of his neighbors in the same ward or arousing their curiosity. In the children's wards, these curtained cubicles serve also to prevent the cross infections that are so common among children in hospitals. The curtain material used is of a tan shade to conform with the various shades of ivory used in the general color scheme of the wards.

Transparent *versus* translucent glass: For some reason, presumably to afford a certain amount of privacy to the ward patients as a group, translucent ground glass was used in the doors leading to the wards when our hospital was built. This kind of glass was also used in offices and various other places in the hospital. We found, however, as time went on, that much better supervision and control of the wards, as well as of the business offices, could be obtained by the use of clear glass and this could be done without infringing on the rights of the patient with regard to privacy. The economy of using clear glass in preference to the more expensive ground glass was another motive. The results of the change were particularly gratifying. Wherever individual privacy is necessary, cubicles are now available.

Preventing Window Breakage

The window pole in careless hands is the greatest single cause of window breakage and damaged window trim. The upper portion of the window frame, usually out of reach, was formerly provided with a socket, in which the metal projection on the window pole would interlock. The pole would often slip and break the pane or injure the molding. For these reasons we decided to replace the sockets by metal plates with larger metal rings

that grip the window pole more surely. The results have justified our expectations. The patients also feel much easier, as there was always the chance of injury from broken glass.

Hand rails: The medical staff in a chronic hospital is constantly on guard to prevent the dreaded terminal pneumonias to which patients in the chronic and aged groups are particularly susceptible. This is the reason why they encourage some degree of activity, if the condition of the patient will permit it. Many of our patients are learning all over again how to walk in conditions where cerebral attacks have left them with various kinds of motor paralysis, or in cases where amputation of extremities had to be done and artificial limbs used. For patients like these we cannot overestimate the value of hand rails in the corridors, in the bathrooms and in the lavatories. They are a comfort to the unsteady ambulant and semi-ambulant patients who, with the help of these hand rails, are able to get around the corridors and rooms. These rails are secured to the wall with metal bracelets placed low enough to protect the wall from damage due to collision with wheel chairs and high enough to enable the patient to grasp them while walking.

Other Improvements

Bumpers: For the protection of the walls, all trucks, such as food trucks, laundry trucks, delivery trucks and stretchers of various kinds, have been equipped with hard rubber bumpers. Projections on ward beds have been fitted with rubber tubing which serves as a bumper. Exposed walls that come together at right angles were reinforced with angle iron attached with bolts that were countersunk in order to leave a smooth surface, to protect the corners from damage due to the careless handling of trucks.

The elimination of noise: In our program the reduction or elimination of noise was studied with special care. Most of our trouble came from the food, linen and delivery trucks. Rubber wheels were "modernized," the rim of the wheel being so badly worn in some instances that replacement of the entire wheel was necessary. Careful and periodic inspection of these trucks is an economy. The tightening of loose bolts, rivets and other metal connections has made these trucks practically noiseless. The legs of all tables and chairs in the hospital were fitted with metal cushions over a layer of rubber, eliminating noise from this source. Anti-slam attachments, door checks and friction hinges were installed wherever necessary. The corridor walls and the staircases in certain locations were boldly lettered, "Quiet Please" in two-inch letters.

Chart holders and carts: For several months we experimented with various types of chart racks and chart holders and finally adopted one that serves our purpose, although it is not yet completely satisfactory. Our chart rack is portable and may therefore be wheeled into the ward at a moment's notice, providing clinical information at any time it may be desired without keeping the charts at the bedside. This chart rack is made up of a series of shelves, so that each chart has its allotted space, and the whole is set on a chassis with two stationary and two swivel casters. It is protected on all four corners by solid rubber bumpers. The rack is forty inches in height and may comfortably be used as a writing surface. A celluloid tab at the left of each shelf permits the proper indexing of the charts. There are handles placed at either end so that the rack may be either pushed or pulled conveniently. The chart holders are made of aluminum with a spring back and are a decided improvement over the cardboard chart covers that are so commonly used. The ideal chart holder, one that will be light in weight, roomy, noiseless and easily kept in presentable condition, has not yet been invented.

Utility rooms: The older types of bedpan sterilizers were replaced with later models and fitted with hot water washing attachments. The utility rooms were painted a creamy white above the blue line that separates the upper part of the wall from the white tile surface below. Wooden drain boards and shelves were discarded in favor of a noncorrosive metal. Drain boards having a wooden core, completely surrounded by a noncorrosive metal were constructed in our workshops at a cost estimated at about one-third of the price that was asked by commercial establishments for these items of equipment. Bedpan and blanket warmers, which were considered luxuries in the earlier days but which we now know to be necessities, were installed in the utility rooms of each ward.

For the Comfort of the Patient

Rubber sheeting: Rubber sheeting is a cause for worry to every intelligent hospital patient who has experienced the discomfort such sheets often cause. The older models wrinkle and injure the sensitive skin of bed patients. Hospitals can find more efficient ways of protecting linens and mattresses from damage by moisture. It goes without saying that the skin of the patient, which is often susceptible to dermatoses and even bed sores, should be considered first in arranging for the protection of hospital equipment. With this thought in mind we installed a type of rubber sheeting that does not wrinkle. It is more com-

fortable for the patient, more durable and retains its smoothness once it is attached to the bed.

Ward pantries: In these pantries we decided to install dishwashing machines, automatic egg boilers and electric bread toasters. Since some of our floors (in buildings with several wings) accommodate as many as seventy patients, it is expected that these additions will aid materially in speeding up ward activities.

Centralizing Nurses' Stations

Nurses' stations: Wherever possible, nurses' stations that had been built in the form of closed rooms far removed from the wards have been transferred to alcoves, constructed centrally, facing the corridors, and in other positions more convenient to the wards. These stations do not obstruct the corridors, are much nearer to the patients and permit a closer supervision of an entire floor, while at the same time the nurse is protected from troublesome draughts.

The care of linen: The proper care of linen in a chronic hospital presents a problem that is at least as great as in the acute general hospital. Approximately half of the patients in a chronic hospital are over fifty years of age and suffer from the diseases that are incidental to advancing years. Since incontinence in one form or another is fairly common among the patients, the older arrangement for the collection and transportation of soiled linen from these patients left much to be desired. The practice was to collect it at regular hours. During the interval an acute problem in ventilation resulted from the accumulation of these linens in the wards. A glass lined linen chute was therefore installed in our largest building, which is centrally located, to facilitate the handling of soiled linen. All of the wards of the hospital radiate horizontally, through corridors, to this linen chute, and the soiled linen accumulates below in a container which is emptied at short intervals. Additional linen chutes in the smaller ward buildings will follow, to relieve congestion in the main chute and to prevent waste in nursing time. The older practice of transporting linen in passenger elevators—the only ones available—was not only offensive but embarrassing, since these elevators must also be used for the transportation of food. There is an opinion in some quarters that the linen chute is not practical because of sanitary reasons, but our experience here with a linen chute that is easily flushed has since proved to be satisfactory.

Steel versus wood: Wooden lockers and shelves in various states of disintegration, affording an easy opportunity for the collection of vermin, formed the bulk of the older equipment. These

and a number of wooden filing cabinets were replaced by rustproof metal containers which are not only more durable but more sanitary. As we have already said, noncorrosive metal drain boards replaced those that were made of wood in the utility rooms and pantries. Steel x-ray viewing stands replaced the older wooden ones that were cracked and warped. Even the built-in unwieldy wooden medicine cabinets were removed and replaced by the more modern white enamel steel cabinets with noncorrosive metal in place of glass shelves. Wooden racks, formerly used for hanging rubber sheeting, have been replaced by a peg arrangement that practically eliminates wood from the utility room where so much moisture is, of necessity, always present.

Special metal (skeleton) containers have been built along simple lines to support drainage bottles at the bedside of patients who drain profusely through thoracotomy and cystotomy incisions. These holders replaced the inadequate and unsightly gauze and adhesive plaster strips that served in an earlier day to hold the bottles in place. In order to remove the bottle, one had to untie or cut the gauze. In many instances, an insecurely tied bottle meant the collection of broken pieces of glass and the mopping up of the floor. These new metal holders, constructed and nickel plated in our plant, have proved to be inexpensive, substantial and serviceable.

Weighing Bedridden Patients

Scales: A new type of scale for weighing in-bed patients was designed and is now in use for weighing bedridden patients¹. This scale is attached to a specially constructed stretcher which can readily be wheeled into place alongside of the bed. The patients can be transferred to the scale and back again to bed with comparatively little effort and with a minimum of discomfort. The former custom was to take patients out of bed and stand them up on the upright scale, if this could in any way be accomplished. Those who could not stand at all were not weighed, although this procedure is considered by the medical staff as a valuable index for therapeutic guidance of the cases.

General appearance of the wards: Visitors to a hospital generally have little direct opportunity to witness the efforts or the skill of the medical staff, but the intelligent and observant visitor is often a good judge of hospital management. The appearance and condition of the patients, the arrangement of the beds, the bed linen and the ward furniture become immediately apparent if they

are untidy or disorderly and the impression is magnified to the point where the entire hospital may be condemned for mismanagement. For this reason we have made an organized effort to teach good habits to all of our employees and patients through lectures, through a printed book of regulations and suggestions, through careful supervision and through the judicious use of more modern mechanical appliances properly distributed. A simple illustration of a scheme to line the beds up in the open wards is the painting of a one-inch line on the red composition floor, which serves as a guide to keep the ward beds in perfect alignment. To maintain a spirit of cleanliness, neatness and order on the part of the patients, many devices have been used, including the rather ancient one of exhibiting a banner in the ward where the patients have been most cooperative in these respects over a given period of time. The novelty soon wears off, however, and other means must be adopted till a new crop of patients comes into the hospital.

(To be continued)

How Good Books Help Restore the Hospital Patient to Health

The therapeutic value of well chosen reading matter for hospital patients is no longer a matter of conjecture, says the *Journal of the American Medical Association* in an editorial on "The Hospital Library."

"No longer is it necessary to emphasize the relationship of the mind to the body and the necessity for paying some attention to the mental aspects of disease," the editorial continues. "The interest of librarians has been aroused, and already numerous large hospitals, including veterans' hospitals, have special departments for this service, with a full-time employee in charge.

"The selection of fiction for a person who is ill is a difficult task. Several recent publications in the field of tuberculosis are so morbid that they would unquestionably have a severe reaction on the patient; the patient with hyperthyroidism needs books with satisfying conclusions; persons with mental disturbances must naturally avoid religious arguments, sex questions and volumes dealing with suicide.

"Fortunately librarians have begun to study the subject scientifically. Carefully recorded experiences within the next few years will yield a sufficient number of facts of value to permit the drawing of conclusions and the making of reasonable suggestions."

¹A Portable Scale for Weighing In-Bed Patients, *THE MODERN HOSPITAL*, October, 1930, p. 156.

Tile—Where It Can Be Used to the Greatest Advantage

By C. W. MUNGER, M.D.

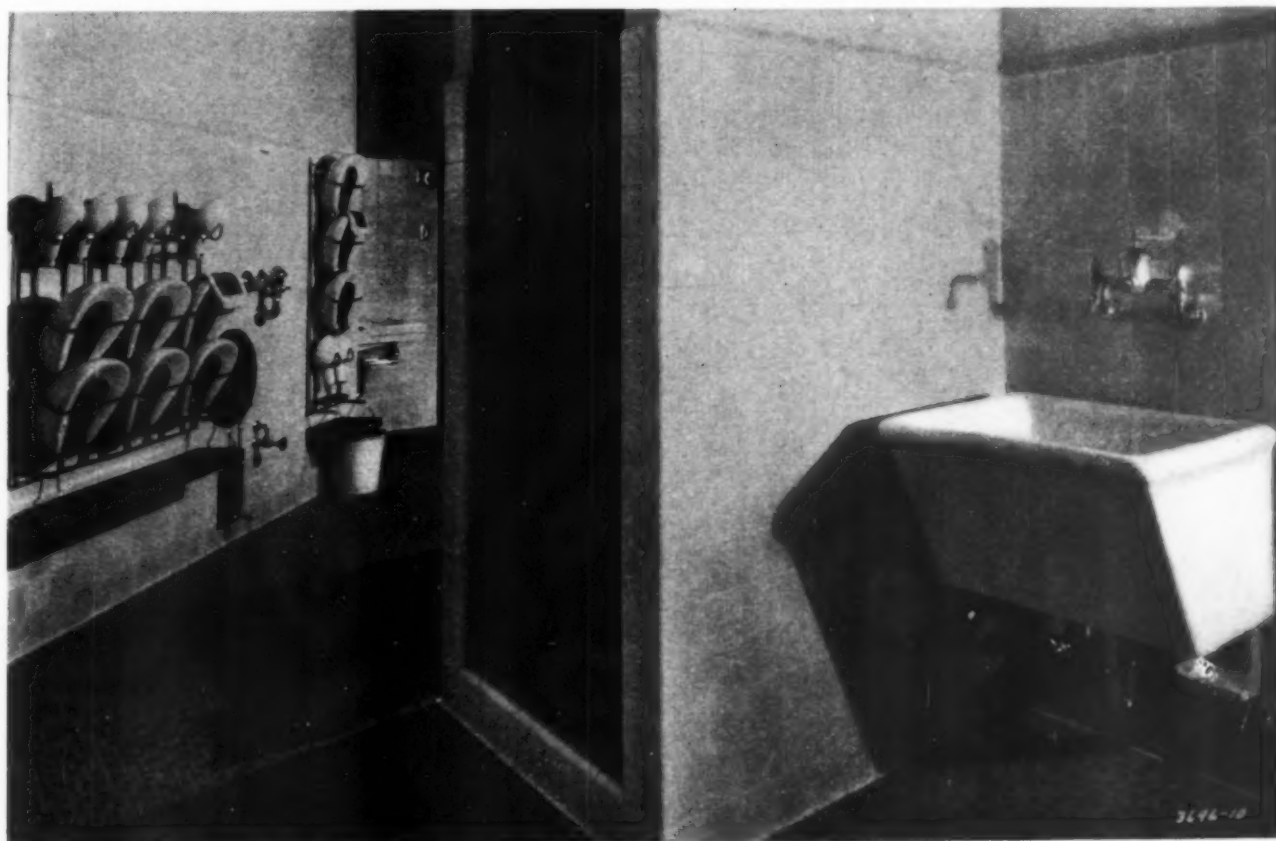
Medical Director, Grasslands Hospital, Valhalla, N. Y.

HOSPITALS of the present day probably use more tile in proportion to their cubic content than any other type of building. This development of the use of tile by hospitals has been the logical result of the progress of medical and hospital thought. The growing conviction of bacteriologists and of physicians generally that infection is mainly a contact rather than an air borne matter, has given marked impetus to the use in hospital construction of readily cleanable interior surfaces.

Tile is not only easily cleanable, but is one of

the few practical finishes to which little dirt can adhere under any circumstances; moreover, its glazed surface makes it impervious to most of those solutions and substances that play havoc with ordinary floor and wall finishes.

The initial cost of a tiled wall or floor is higher than the cost for most other materials. When upkeep cost is considered, however, it is sometimes found that the initial cost, plus the upkeep cost, over a period of years may be less for tile than for the cheaper materials. This has become increasingly true in the past ten years because of the



The use of tile for the walls and floor of this utility room has improved its appearance.

enormous increase in the cost of labor for painting, wall washing, replastering, scrubbing and similar operations, which are necessary with less durable finishes.

A potent factor in the wider application of tile in hospitals is the constant effort of the tile industry itself to adapt its product to the needs of the hospitals. The commercial wall and floor tiles of to-day are so much superior to those of the past and the possibilities of their use so much extended that in recent years tiles are being used in hospital work for purposes previously unknown. At the present day it is possible to obtain tiles in a wide selection of beautiful colors.

In most instances, the difference between the cost of white tile and colored tiles is inconsequential. Then, too, the manufacturers have introduced variations in the glazing of wall tiles that make possible surfaces ranging from the duller mat glaze to the highest sheen and slipperiness. Similarly, floor tiles are obtainable with extremely smooth surfaces, and in all gradations toward a rough, nonslip surface.

Tile manufacturers have followed the needs of their customers closely and in fact have at times anticipated their needs by developing shapes and sizes of tiles adaptable to almost every purpose. The person who looks at a finished piece of tile work seldom stops to think that it probably includes, in addition to the ordinary flat tiles, such special pieces as internal coved angles, external coved angles, corner pieces, caps and as many as a dozen other shapes needed for special conditions. The fact that all of these rather special types are obtainable at moderate cost, has undoubtedly encouraged the use of tiled surfaces.

Tile Is Indispensable in the Kitchen

In my experience every type of floor other than tile has failed to stand up against daily soiling with greasy liquids, such as are encountered in every kitchen. This fact has made the tiled floor not only indispensable in the modern kitchen but a tremendous labor saver as well. Such floor materials as terrazzo and cement are hard enough to stand the wear and tear of kitchen traffic, but regardless of the amount of labor put into their cleaning, they never look as clean nor are they ever actually as clean as a properly laid tiled floor that is kept clean by simple scrubbing.

Tile is the most nearly satisfactory flooring that can be used under conditions involving constant wetting, such as occurs in sterilizing rooms, bathrooms and in similar places. The appearance of tile under these conditions is undoubtedly superior to that of other floorings. Tile will also withstand heavy foot or wheel traffic admirably, and where

noise is not a factor it is the preferred surface.

The increasing use of wheeled vehicles in hospitals and the increasing desirability of moving patients' beds through corridors of the hospital to dressing rooms, solariums, and even to operating rooms, have made the use of resistant wainscots desirable. Many of those in touch with modern hospital construction believe that in the long run it is economical to use tile as a wainscot in all corridors and passages, because of its relatively high resistance to marring and because smudges and finger marks, which ruin a painted wall and necessitate frequent repainting, can be removed from tiled wainscots by means of a damp cloth.

Choosing Floor and Wall Materials

The consultant, the architect and the building committee are all interested in deciding upon the proper materials to use for the floors and walls in the many different sections of the hospital building. The matter of floors and flooring in hospitals has been the subject of much intelligent study by competent observers. My observations are based upon these studies, as well as upon my own experience. In my opinion, cement is not the flooring to select for use in many parts of the hospital. It is undoubtedly satisfactory for storerooms for dry materials, and it suffices in machine rooms, garages and similar spaces. On the other hand, wherever meticulous cleanliness is necessary for the safety of patients and where appearance is any sort of a factor, cement is probably undesirable.

The two principal alternatives, where hard flooring is desirable, are terrazzo and tile. Terrazzo is undoubtedly superior to cement and is perfectly satisfactory for floors and bases in many parts of the hospital building. Tile, however, is the material of selection wherever the floors are exposed to frequent wetting from any source, and tile is indispensable where this wetting contains oils or greases, as in kitchens.

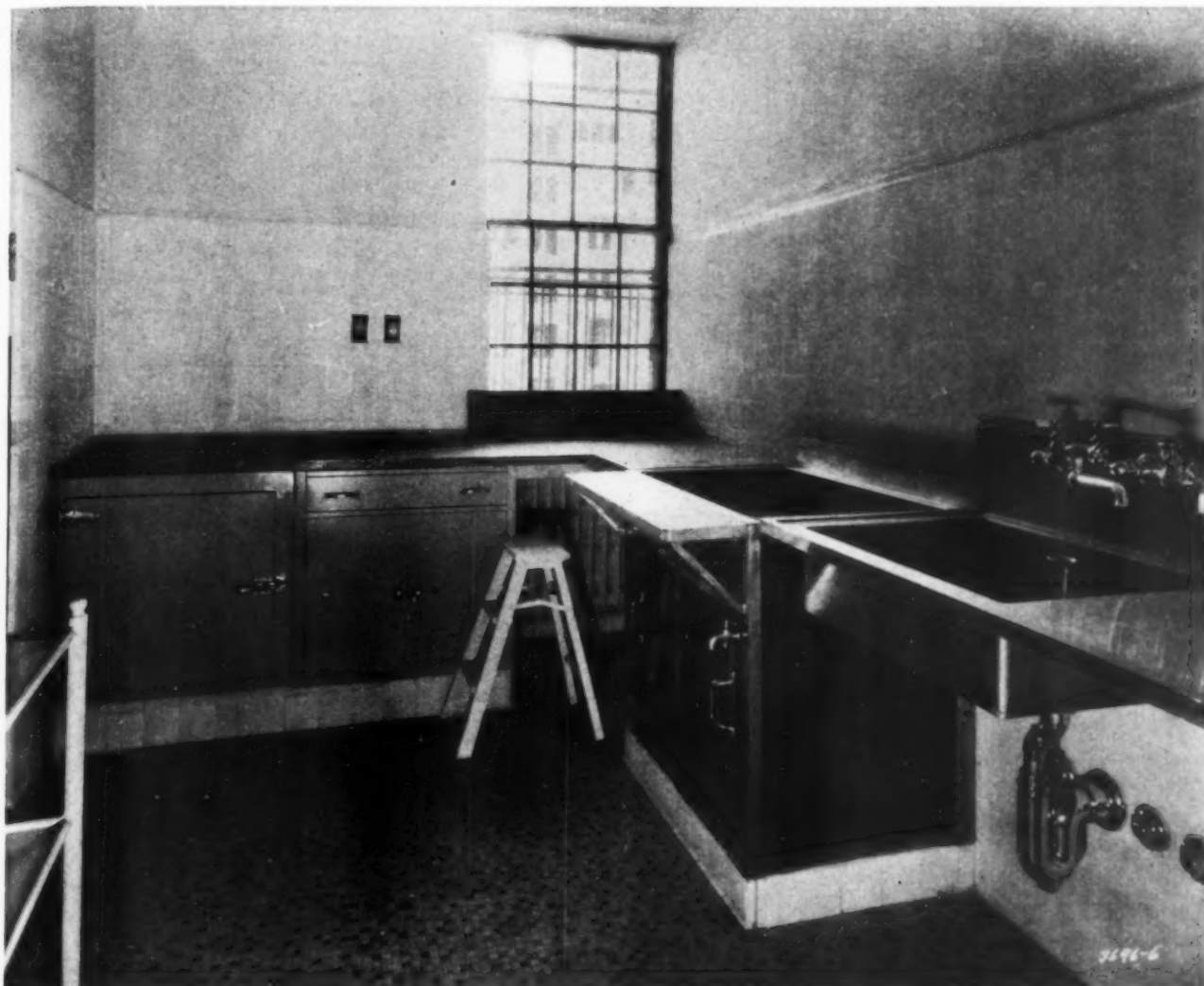
Floor coverings such as linoleum and rubber have proved most valuable to hospitals. They are preferable to tile or terrazzo in certain spaces. The best measuring rod is whether, for a given floor, it is more important for that particular section to be silent or to be easily cleaned. When silence is not a factor, the hard flooring receives approval and, in accordance with the location, either tile or terrazzo is desirable.

In considering the use of tile for wall surfaces or wainscots, it is important to consider whether tile is suitable from the point of view of appearance. Also, is tile suitable from the point of view of utility? If these questions are both answered in the affirmative, the prudent planner will then

attempt to compare the relative costs of tile and other finishes. As has already been stated, this comparison in fairness must include not only the original cost but also the cost of upkeep over a reasonable period of years. For tiled walls, the original cost represents the entire structural cost. For plaster finishes, to the original cost must be added the cost of initial painting, the cost of re-

color over that of paint is that the color, once selected, is the one that will be installed, while with painting one merely gets each painter's interpretation of the color sample. Tiles of pleasing color give an appearance of cleanliness, neatness and freshness, which undoubtedly has good psychic effect.

Color in tile, as well as in other surfaces, is of



The tile floor in a ward pantry stands up well under the hard service it receives every day.

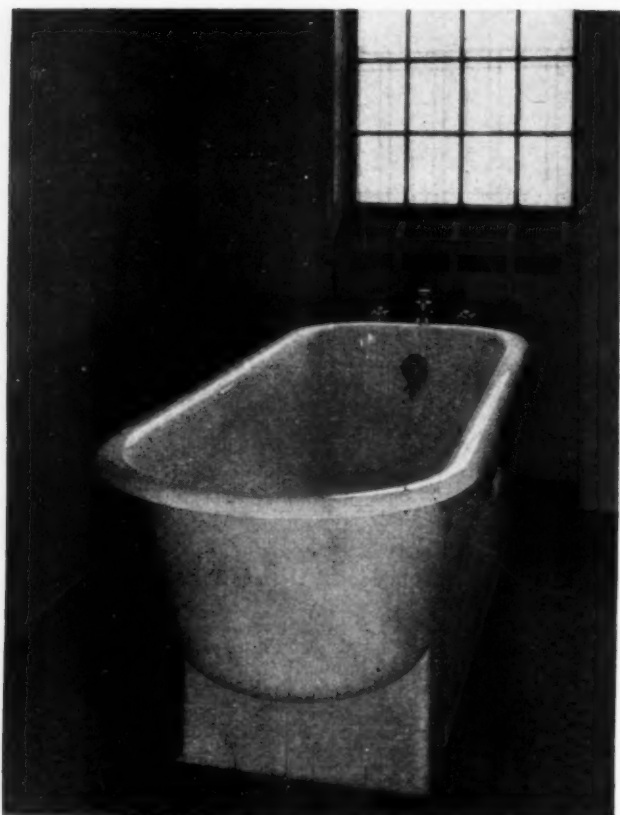
painting about every three years and the cost of extensive patching of plaster at least once in a decade. As to the routine cleaning of surfaces, the cost of the occasional washing of tile is to be compared with the cost of the washing of painted walls and, in addition to this, the relative appearances of tile and of painted walls after washing should be considered.

The development of colored tile makes possible the use in the hospital of dignified and appropriate colors that will not fade and that are adapted to the particular purpose for which the given section of the hospital is to be used. Another value in tile

undeniable psychological value to patients. In view of the researches of psychologists, colorists and the observations of psychiatrists, hospitals are giving careful thought to the proper selection of colors for different sections of the building.

In this connection, it is fitting to mention an interesting article that appeared in *THE MODERN HOSPITAL*, March, 1924, page 260, entitled "How Color Affects the Mental Attitude and Physical Condition of the Patients," by M. Rea Paul. This article recommends pleasing, neutral colors such as buff for general wards; in psychiatric work, greens are considered valuable for disturbed or

hyperactive patients; shades of pink and even fairly pronounced reds are considered useful for those in depressed states. Much of the color in hospitals, naturally, is accomplished through the painting of walls and through furniture finishes and covering. It is worth remembering, however, that with the increasing use of tile in all parts of the hospital, colored tiles may be used to conform with the general color scheme of a section, thereby producing a far more pleasing effect than is pos-



A free high standing bathtub on a tile base is a great convenience to both patients and nurses.

sible with the proverbial white tile in common use.

Where ceramic floor tiles are used, it is no more expensive to lay them in interesting and even decorative patterns than to have a floor of a plain color. Some desirable effects have been secured by what is called "Random Pattern" ceramic tiles. By this method various harmonious colors of tiles are used on a given floor, but are not fashioned into any sort of formal pattern. This gives a desirable variegated effect which has utilitarian value in that this type of floor shows footmarks less than almost any other.

One of the essentials of achieving a beautiful interior for a hospital building is the judicious selection of color in tile and other materials. The "material and color schedule," a device used by architects for recording the selections of the owner or consultant as to various finishes, merits a care-

ful study by a person who recognizes the practical needs of the hospital, but who also possesses good taste in color combinations and knows the principles of the use of color for its psychological effect.

The operating room is the hospital division in which tile found its earliest use. It was also the division where recognition was first made of the value and importance of proper color selection in tile. This was, perhaps, due to the fact that the operating room was the one place in the hospital where the doctors themselves underwent exposure to the ocular effects of shiny white surfaces over protracted periods. There have been, in the main, two schools as to operating room colors, representing the adherents of grays and greens, respectively. At the present time, the "greens" seem to be on the winning side. The points to be considered in selecting a color for the finish in operating rooms are: (1) It is desirable to have a color that will be as easy as possible on the eyes of the operating room workers; (2) it is necessary to find a color that has this property, but that also will not absorb so much light as to reduce illumination. The fact that gray and green both have some of these properties has resulted in their selection over other colors.

In some instances, a darker shade of the desired color is used for the lower seven feet of the wall surface and a lighter shade for the upper portion. The darker color below seven feet is restful to the operator's eyes and encompasses the usual line of his vision. The lighter color above reflects more light and improves illumination. It is customary to have a light colored ceiling such as buff or cream. There are arguments in favor of various colors for operating room use, but the scope of the present article is insufficient for their inclusion here. Suffice it to say that few, if any, white operating rooms are being built to-day, and color, apparently, has come to stay. In fact, the successful use of color in operating rooms to displace the proverbial white walls has undoubtedly influenced the application of colored finishes to those portions of the hospital inhabited more constantly by the patient.

Tile Walls Desirable in Surgeries

The color for the operating room walls having been selected, it is necessary to decide upon the materials to be used. There is much to be said in favor of tiling operating room walls from floor to ceiling. It is logically contended by some that if a sanitary surface is needed near the floor of the operating room, it is doubly needed on those portions of the wall that are less accessible to frequent cleaning. The only possible objection to complete tiling of operating room walls is the initial expense. As mentioned previously, where long time upkeep

is figured, the tile walls might be proved an economy. In practically all instances, the operating room has at least a wainscot of tile. Such wainscots should be set flush with the plaster above and should be not less than five feet and a half in height. I have observed one or two new hospitals where the wainscot has been carried to only four feet. It seems a great mistake, if tile is used at all, not to carry it above the point where soiling from finger marks and marring from the various activities carried on within the room may occur.

Choosing the Operating Room Floor

Tile is an extremely desirable material for the floors of operating rooms. Here, since the exposure of the floor to both wetting and soiling reaches the maximum, tile is ideal.

The comfort of the staff, who admittedly may, although they rarely do, develop foot troubles from standing for long hours upon hard floors, should, it seems, be sacrificed to cleanliness and ease of cleaning. In one or two instances rubber flooring has been used in operating rooms, resulting in a pleasing appearance and in foot comfort to the staff. The use, however, of any floor covering that must be glued down, in the presence of moisture conditions such as exist in operating rooms, seems to me to be imprudent. The test of use will, of course, decide this point.

Various types of tiled flooring are applicable to operating rooms. Ceramic tiles are practical and inexpensive; four-inch by four-inch vitrified tiles have been used with success. When tile other than ceramic is used, it is important that it be laid evenly and that the joints between tiles be perfectly smooth so that the entire floor presents a flat surface without ridges or indentations, which are the source of discomfort to persons standing or walking upon them.

The advent of ethylene gas as an anesthetic has occasioned the use of crisscross metal strips in floors of many of the newer operating rooms. These strips are grounded and serve to prevent the development in gas machines and other equipment of static charges that may generate sparks and cause dangerous explosions. These strips may readily be laid in tile floors. In fact, similar strips have long been used by some architects to prevent the development of extensive cracks in terrazzo, due to the settling of buildings. The tile manufacturers report recently that a successful substitute for the metal strips consists of the use of a pulverized metal, employed as a grout material in the tile joints, which is said to act as a ground for any static electricity that might occur. It is also less expensive than brass strips.

Quarry tiles are often selected as flooring in

kitchens and laboratories. Tiled wainscoting in laboratories is valuable from the point of view of maintenance cost and appearance and is finding extensive use.

In many hospitals, however clean they may otherwise be, it is possible to find insanitary conditions in the janitors' closets or "slop sink" closets, as they are sometimes called. Tiled floors and wainscots in these closets make them easy to clean and offer an inducement to workers to keep the closets neat and orderly. The janitors' closet, which so often is small and dark, is one of the few places in the hospital where, in my opinion, there is any good reason for the use of white tile. Hospital rooms for the handling of soiled linen can be kept sanitary if they have floors and walls of tile.

Little has been said of the importance of use of tile in ward pantries, utility rooms, bathrooms and toilets. It goes without saying that no up-to-date building should be without tiling in these sections. In rooms such as these, which contain much built-in equipment, the ease with which fixtures may be



Linoleum floor, terrazzo base, tiled wainscot and acoustical ceiling were used for this hospital corridor.

placed upon sanitary tile bases and with which they may be recessed into walls, reduces the labor in cleaning and upkeep. Incidentally, the failure to provide the proper sanitary bases, furring and such things, in these accessory rooms detracts markedly from the shipshape appearance of the hospital, adds to the cleaning problems and reduces the sanitary possibilities obtainable with tile floors.

Tile bases beneath high bathtubs improve appearance and make cleaning easier. The setting of kitchen ranges on one-inch or two-inch cove tile bases enables the hospital to get the maximum benefit from its tiled kitchen floor.

The use of such a permanent material as tile makes architectural changes more difficult and more expensive. The average need for such changes, however, is insufficient for this point to carry much weight. The general use of expensive but valuable materials is having an interesting effect upon the work of consultants and architects in that it encourages meticulous care in the original planning of the institution. The exercise of such care is of immeasurable value to any building program.

An article of this nature is necessarily a reflection of the opinion of an individual. In this instance, it reflects my experience in different hospitals and follows the line of reasoning I have used in a recent extensive building program. I believe that hospital administrators have often lacked the courage of their convictions in recommending costly building features, no matter how necessary or how eventually economical they may be.

Since so many of our newer structures look old and battered after a few years' use, it has seemed worth while to call particular attention to tile for its value, permanency, beauty and low upkeep cost, and to emphasize the importance, in selecting interior finishes, of considering the ultimate rather than the immediate cost.

More Patients in Mental Than in General Hospitals

As an indication of the important position occupied by mental and nervous diseases in relation to the nation's health, W. L. Treadway, assistant surgeon general of the Public Health Service, declared in an address before the Southern Medical Association at Louisville, Ky., recently, that approximately 324 persons in each 100,000 of the general population are confined to hospitals for mental and nervous diseases as compared with 192 in general hospitals.

Doctor Treadway pointed out that 45.7 per cent of all hospital beds in the United States are devoted to the care of mental and nervous diseases, and 95.4 per cent of these are occupied. Last year 128,964 new patients were admitted to these hospitals and 25,445 were readmitted. Approximately 40 per cent of all persons applying for medical advice at public clinics or dispensaries are suffering from some mild form of mental illness.

For the first time in history a wider interest is now being shown in disorders of the mind by the public, he said. Failures and unconventional behavior and conduct are being interpreted not in terms of institutional provisions but in terms of personality factors having behind them mental implications.

There is a growing conviction that institutional provision alone is an unwise and uneconomical method of handling this group of the population. Instead, it is being more and more generally recognized that community sources of these personalities must be uprooted, that mental patients must have an early and adequate treatment, that underlying causes of mental diseases and adverse social behavior must be discovered by study and investigation.

The possible solution of this situation is evolving through the development of psychiatry as a special branch of medicine, he said. This special branch of medicine, because of its knowledge of individual needs and requirements, is equipped to offer assistance and guidance to those groups of the population who cannot comply with the liberal standards of conduct maintained by society.

Valuable Booklet on Control of Tuberculosis Is Published

"The Organization of a Rural Tuberculosis Service" is the name of a well prepared and comprehensive booklet written by Dr. Stephen A. Douglass and issued by the Milbank Memorial Fund. The booklet deals with control of tuberculosis as it is carried on in Cattaraugus County, New York, and it is published with the hope that it may be of use to other rural communities where the inauguration of tuberculosis control measures is planned.

Two companion volumes to this booklet were recently published: "School Health Work in Cattaraugus County" and "Improving the Dietary Habits of a Rural Community."

This demonstration in Cattaraugus County, according to an introductory note, was established by the local governmental authorities with the aid of appropriations from the county, the state and the Milbank Memorial Fund, to enable the county to develop a modern county health service that would test the value of applying in a rural area, at a cost it was believed might in the future be met entirely by the community, methods of public health administration that had been used effectively in cities to lower morbidity, to reduce mortality and to raise the standards of individual and community health.

Safeguarding Motherhood at the Chicago Lying-in Hospital

By JOSEPH B. DeLEE, M.D.

Chief of Staff, Chicago Lying-in Hospital, Chicago

IN the thirty-five years of life of the Chicago Lying-in Hospital, it has been housed in three buildings—first a rented former residence, second a new pavilion built by the Mothers' Aid Club, which was later to become our isolation unit, and third, the main hospital where we now are. The fifteen maternity beds in the remodeled residence were increased to thirty in the temporary Mothers' Aid Pavilion and to 140 in the present hospital. A few of the beds in the present hospital are used for clean gynecologic cases.

The new Chicago Lying-in Hospital, which is now being erected on the Midway and which will be affiliated with the University of Chicago, will contain 123 beds for clean maternity cases, 100 cribs for babies and twenty beds in the isolation unit known as the Mothers' Aid Pavilion. There will be, in addition, ten beds for waiting unmarried mothers and four beds for wet nurses, making 157 beds altogether to be devoted to the care of obstetric cases.

The gynecologic work of the hospital, by contract with the University of Chicago, will be done at the Albert Merritt Billings Hospital, pending the erection of a gynecic pavilion. A start of \$50,000 has been made toward the building fund for this unit.

An Important Member of the University Group

The Lying-in Hospital is now one of the university clinics of the University of Chicago, but its management will be the same as before, except as to the medical attending staff. The obstetricians and gynecologists are to be full-time or part-time men appointed and paid for by the university. In addition there is to be a courtesy staff, composed of physicians in private practice who will be accorded all the privileges of the private rooms and the smaller wards.

The new hospital is on the university campus, with exposure on all sides, mainly south. It fronts

a broad wooded parkway, "The Midway," and there are streets on either side. Its style is Gothic and it presents a striking contrast to the other buildings on the campus, which are Neo-Gothic. The University Cathedral at the other end of the campus makes a fitting counterfoil. All together an imposing architectural panorama is presented to the thousands of motorists who pass through the Midway, a wide boulevard connecting two large parks.

The Eighth Escutcheon

The institution is composed of two structures without any direct connection excepting by conduits and pipes. Its main building, the clean maternity, has five floors, a large roomy attic and a high basement. The smaller building has the Mothers' Aid Pavilion—the isolation unit—and the school, or the department of obstetrics and gynecology of the university. A lecture hall in the school abuts on the main building but without direct communication. Ground is being reserved north of the school for the future gynecic wing.

Attached to the main building, projecting toward the Midway, is a one-story wing. This is the Max Epstein Dispensary where the prenatal and the gynecologic clinics will be held. A short cloister completes the architectural design with the end of the Mothers' Aid Pavilion, enclosing a large garth that will provide beauty and privacy for the patients. This cloister bears on its arches eight escutcheons on which are engraved the names of the men who have made notable contributions to the science and art of obstetrics: Palfyn, Van Deventer, Smellie, Porro, Sängner, Paré and Baudelocque. One escutcheon has been left vacant. On it will be inscribed the name of the man who discovers the cause of eclampsia or the convulsions of parturient women, a disease that carries off nearly 5,000 women in the United States each year, and for which we have no



A Gothic tower of stone dominates the main wings of the hospital.

rational treatment. In the cut stone above the main entrance on each side of the seal of the institution are the heads of Sir James Y. Simpson, the discoverer of obstetric anesthesia, and Ignatz P. Semmelweis, the discoverer of the cause of childbed infections.

A hospital has a purpose beside the mere taking care of patients. Indeed it has several other purposes. It should be a fountain of teaching for doctors, students, nurses and, not least, the public. It should be a center around which rotate the health activities of the community. Further, it should exemplify and prove the tenets and practice of the medical men in charge of it. A hospital, like a great genius, should be a mental and moral force, a positive good profiting all the peoples of the world. A man can spread his teachings far and wide by reading papers in medical conventions, by publishing his ideas in journals and in books, by lectures to students and others and by motion pictures, but he can spread the gospel he believes in no way as well as by means of a living institution. The doctors, students and nurses who live and learn in such a place carry away ineffaceable impressions of right and wrong. The experience works backward also. If the principles on which the institution is founded are wrong, they will not stand up under the hot scrutiny of the young medical neophytes and of the older and more experienced visitors and observers. Changes are soon wrought. With this in mind, let me outline the main principles on which the reputation of the Lying-in Hospital rests.

Maternity Rooms Must Meet High Standards

First, we believe that the obstetric case is a surgical case with equal pathologic and physiologic dignity, and that it requires all the solicitude, all the equipment and all the skill that major surgery demands and at present receives. Therefore the maternity should be the equal of the surgery. Indeed it should be even better, since the conditions under which confinements are conducted are more difficult for everybody concerned, including the patient, not to mention the fact that in obstetric practice each patient is two patients. The delivery room should be better than the surgical operating room, the sterilizing equipment the same and the wards the same. How many modern maternity wards meet these requirements?

Second, we believe that infected patients, from whatever source, medical, surgical, gynecologic, obstetric, ophthalmologic or otologic, carry intimate and remote dangers to the parturient woman, and that, while they may not be dangerous to the surgical or gynecologic patient—a point that has not by any means been proved—the strictest archi-

tectural and administrative isolation of the two kinds of cases must be established and maintained. Here is not the place to defend such a statement. I have done so in previous numbers of THE MODERN HOSPITAL and have submitted testimony that would quickly convince any jury of mothers, husbands or life insurance adjusters.

Why Isolation Is Imperative

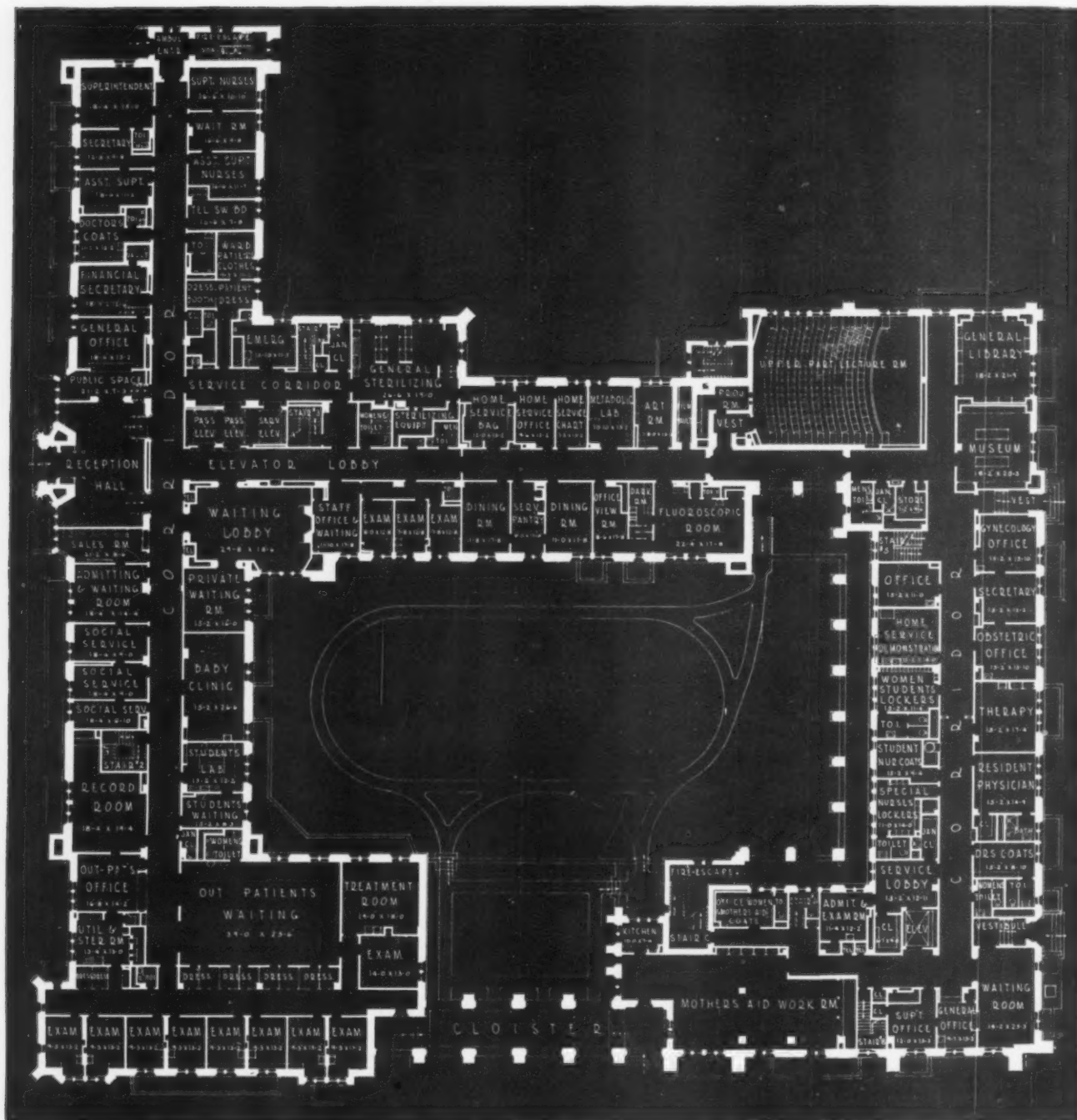
Since I wrote these papers, reports confirmatory of the truth of my position are piling in: three epidemics of puerperal infection in St. Bartholomew's Hospital, London, which the pathologist, who made a careful study of them, proves to have been borne by air or by a carrier; epidemics in two of the best maternities in the United States; twenty-four cases in Britain, reported by King in the *British Medical Journal* for March, 1930, and one epidemic due to carriers, reported by Robinson in the *London Lancet* for January 11, 1930. McGregor, in reporting to the British government on three serious epidemics in Glasgow, questions the carrier theory and suspects air-borne influences. Kinlock presents statistics of deaths from infection in Aberdeen, Scotland: 2.8 per cent for midwives, 6.9 per cent for doctors in home practice and 14.9 per cent in the in-patient institutional service. It seems that the maternity ward is the most dangerous place to have a baby. Something must be done about institutional obstetrics. If we do not do it an aroused public will.

This institution has sought to minimize the dangers as follows: In the first place, no infected case is admitted to the main building, the patient going directly into isolation in the Mothers' Aid Pavilion; second, a patient who develops fever in the house is immediately sent to the pavilion, or if there is a reasonable doubt of its being sepsis, she is put on "room isolation," administrative isolation, or into an "observation" room, one of which is on each floor. If the fever persists a day or two she is transferred to the pavilion. In this way the clean wards are kept free of puerperae who though but slightly ill themselves may be the starting point of an epidemic.

A Necessarily Complicated System

The babies are watched with intense carefulness for the first sign of infection, and upon the least suspicion are placed in temporary isolation in a cubicle in the isolation nursery, one of which is on each floor. If infection develops, the baby is transferred to the Mothers' Aid Pavilion.

In this building, separated from the other, each woman has her own room with a sterilizing and utility closet adjoining. On one floor, access to



This plan of the first floor shows the arrangement of the administrative offices and the relation of the main part of the hospital to the isolation pavilion, shown at the right.

the rooms may be had from a balcony, this arrangement being made to handle particularly contagious cases, such as scarlet, measles and tetanus. Incinerators are provided on each floor and in the operation suite, for the immediate destruction of infectious material. The Mothers' Aid Pavilion is the general hospital annex to the maternity, receiving as it does, pregnant and puerperal women afflicted with medical, surgical, aural and other complications, such as pneumonia, influenza and appendicitis.

The babies are handled with identical precau-

tions. Each infant has a little room with an outside window and door, a table for its bath and other necessary equipment. In addition to the architectural isolation, a careful antiseptic administrative technique is practiced.

This complicated and expensive system of defense has been developed through the sad lessons learned during the twenty years of my service in four general hospitals as head of the maternity wards, and from observations of epidemics in other hospitals in which I conducted births. Thus I obtained information of what was going on in

them. Painful experiences taught me that puerperal infections are often of mysterious origin and that no system that relies wholly on human agencies may be trusted to control their spread.

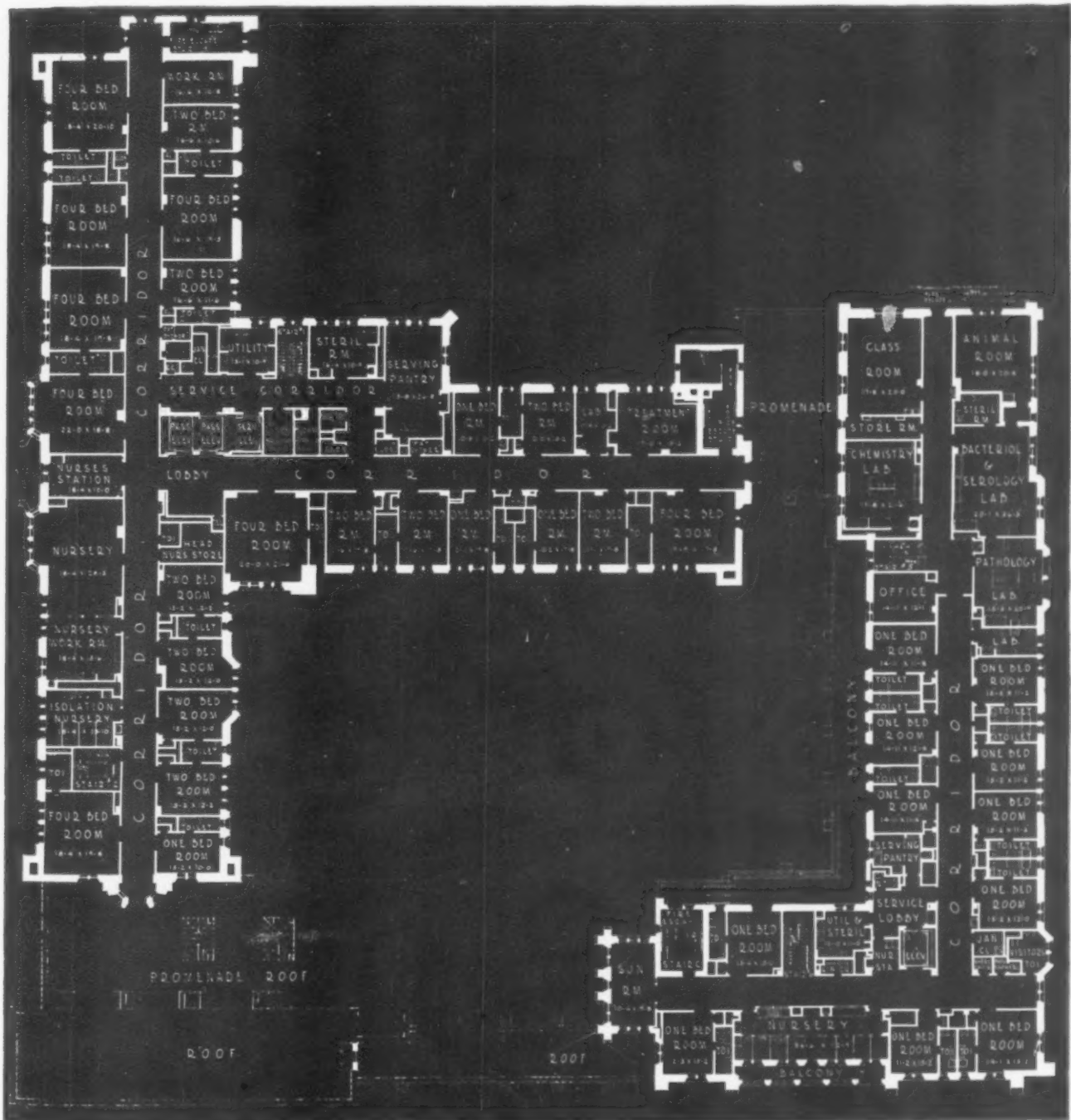
Special Features of the First Floor

Let us turn to a description of the separate floors of the new hospital.

The basement differs little from that of other hospitals. The kitchen, laundry, storerooms and locker rooms are found here.

The first floor of the main building has the

administration offices of our numerous services. A large waiting room is provided because we have the pass system for visitors and they congregate in numbers just before the visiting hour begins. The reception hall is small and dignified without the public counter which so frequently gives the impression of a second-rate hotel lobby. A mature woman will sit at a small table with a telephone, and her duties will be simply to direct everyone to the proper office. The lines of traffic are arranged to enable a woman, coming in in labor, to be brought quickly under the care of the receiving



On the second floor of the main building are the maternity and prenatal services and in the isolation wing, classrooms and laboratories as well as private rooms.

nurse without exposure to the gaze of the hundreds of persons having business around the hospital entrance.

The administration services are on the left and the admission and dispensary services on the right. Another entry is provided for the dispensary patients, those visiting the daily prenatal and gynecologic clinics. These clinics are at the south end of the building and are of standard arrangement. Ten examining rooms, each with two dressing rooms, provide for a rapid succession of patients and the individual privacy of each one. A small room for ambulatory treatments and clinical lectures is provided. An out-patient department or home obstetric service will be conducted. It is expected to replace in part the midwife in certain districts close by.

Second, Third and Fourth Floors

The x-ray department has been placed at the east end of this building, in close proximity to the school and to the future gynecologic pavilion.

With the exception of that for the birth rooms and the isolation unit, the work of sterilizing dressings and of making glucose solutions will be done in the general sterilizing room on the first floor. This includes the work needed for the home service and the Max Epstein Dispensary.

On the second floor are two services, one the usual maternity with a nursery, and the other, the prenatal department. Patients suffering from heart disease, nephritis and other medical and noninfectious surgical complications will occupy one wing of this floor.

The third floor is the main maternity section, for free and part-pay cases, in wards of two beds and four beds. Two capacious nurseries are provided, each with a baby's bath.

The fourth floor is devoted exclusively to private rooms each with toilet facilities. There is only one large nursery here. Before the birth room floor is described, the prevention of epidemics in the wards should be mentioned.

Structural Barriers Against Contagion

Necessity has taught me to institute both architectural and administrative isolation of infected cases. The separation of the buildings has been mentioned, but structural barriers against contagion have also been raised in the main building.

On each floor is an isolation unit for a suspected case where the patient may wait before being transferred to the Mothers' Aid Pavilion. This is not used much because as a rule we make the diagnosis early and get the danger source of an epidemic out of the house at once. Every ward has its own utility room, with an outside window

and natural ventilation. I hold the modern inside bathroom and utility room anathema. Sun and light keep a water closet clean and sweet and help to disinfect everything in it.

Individual toilet rooms limit the spread of contagion through the bedpans, in addition to keeping the bedpan traffic out of the public corridors. They are expensive to build but cheapest in the end, or even long before the end.

Artificial ventilation has been limited to what the law demands and natural ventilation substituted when possible. Has anyone ever considered how to clean the air ducts, say after ten years? Has anyone ever looked into a duct after ten years? No air duct yet built allows air always to go only one way.

One of the greatest scourges of modern maternity wards is the suppurative skin diseases affecting the newborn babies. They are variously termed, pemphigus, impetigo, pyoderma or blisters. They are in the highest known degree contagious and some epidemics exhibit a large mortality. Many hospitals have pemphigus continuously endemic, and it reaches epidemic proportions every year or so, which necessitates the closing of the maternity ward for long periods.

How Contagion Is Combated

Only the strictest isolation, architectural and administrative, can cope with this contagion. We have proceeded as follows. If a newborn baby is born with blisters it is sent at once to the Mothers' Aid Pavilion. In the nursery the most painstaking watchfulness is kept by the supervising nurses to detect the first bleb or pustule. For this reason a sufficient number of experienced supervisors must be provided. The work cannot be trusted to young women in training. On the discovery of the first suspicious spot the baby is treated and placed in a cubicle in the isolation nursery, of which there is one on each floor. If the disease spreads the child is transferred to the Mothers' Aid Pavilion.

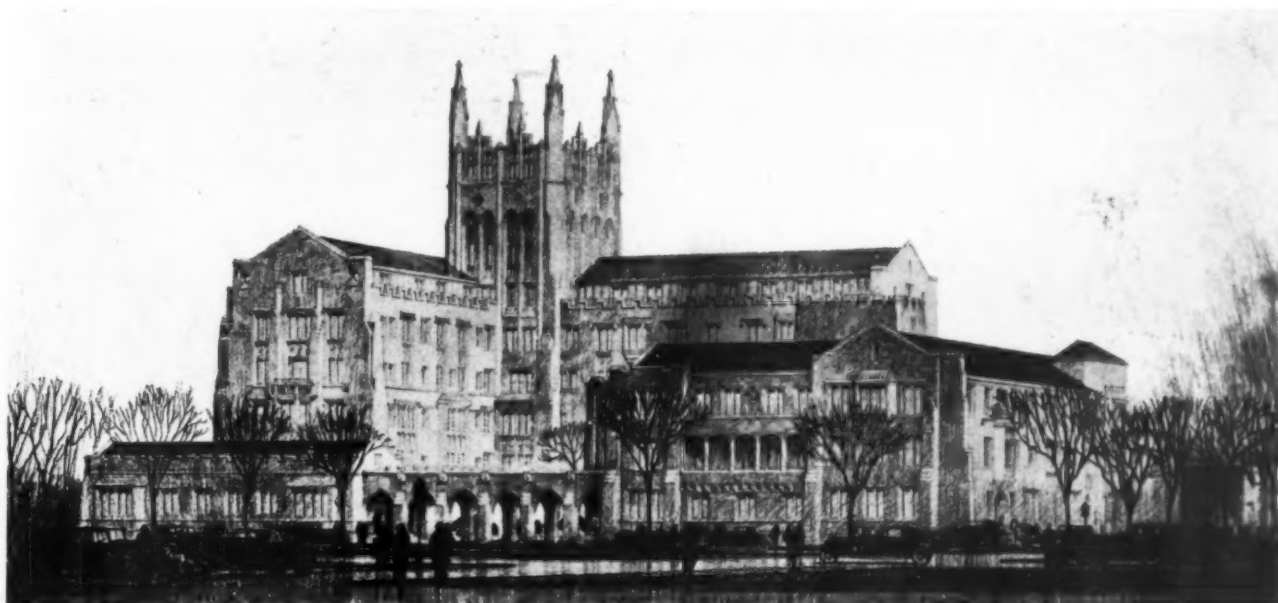
The fifth floor is called the "Life and Death" floor because life and death go hand in hand through its halls. Since more women die from infection than from any other single obstetric complication, extensive provision has been made to prevent it. The sterilizing room first greets you as you enter the birth room department. It is in the center of the service and impresses with its importance all who see it—doctors, students, nurses, servants, patients in labor and their husbands. If the sterilizing for the birth rooms were done downstairs it would lose its individuality. Here the nurses engage in a personal fight with the bacteria that threaten their patients and all

the others know that such a war is continually going on. I am told it is cheaper to have all the sterilizing done in one central station, but I know better. Outside of the moral lesson just mentioned, the sterilizing of supplies at the place where they are consumed avoids the danger of contamination from a long haul, by irresponsible servants, and places the responsibility for perfect sterilization exactly where it belongs.

In addition to the regular birth rooms is an

encircling three sides of the pit. A high glass partition prevents the observers from spitting on the sterile field, and keeps dust from falling on it. In addition each visitor at operations wears a mask.

The rest of the wing is devoted to study and conference rooms for students and observers, a laboratory, a "hand" library, dressing rooms for men and women doctors and living quarters for the residents and the professor. By having these



The new hospital on the University of Chicago campus fronts "The Midway," a broad wooded parkway, and there are streets on either side.

isolation delivery room, removed from the others. It is intended for a patient who has a coryza, or simply a positive Wassermann, without florid syphilitic manifestations, or who is suspected of being not absolutely clean. Any woman with fever or a suspicion of infection is not admitted to the birth room floor but is sent to the Mothers' Aid Pavilion. If fever or suspicious symptoms develop on this floor she is likewise transferred.

Motion Pictures Play Their Part

Conforming to the principle that the obstetric case is a surgical case requiring even better working facilities, the birth rooms and their auxiliaries are as large as or indeed larger than the usual operating room suite. They are provided with all the paraphernalia that the most exacting surgical technique could demand.

Four birth rooms will care for 4,000 deliveries a year, that is, with a sufficient number of labor or first stage rooms. Of the latter we have nine. The amphitheater in the east wing is adapted for deliveries and cesarean sections. It seats eighty-five persons, has a strong pitch and a balcony

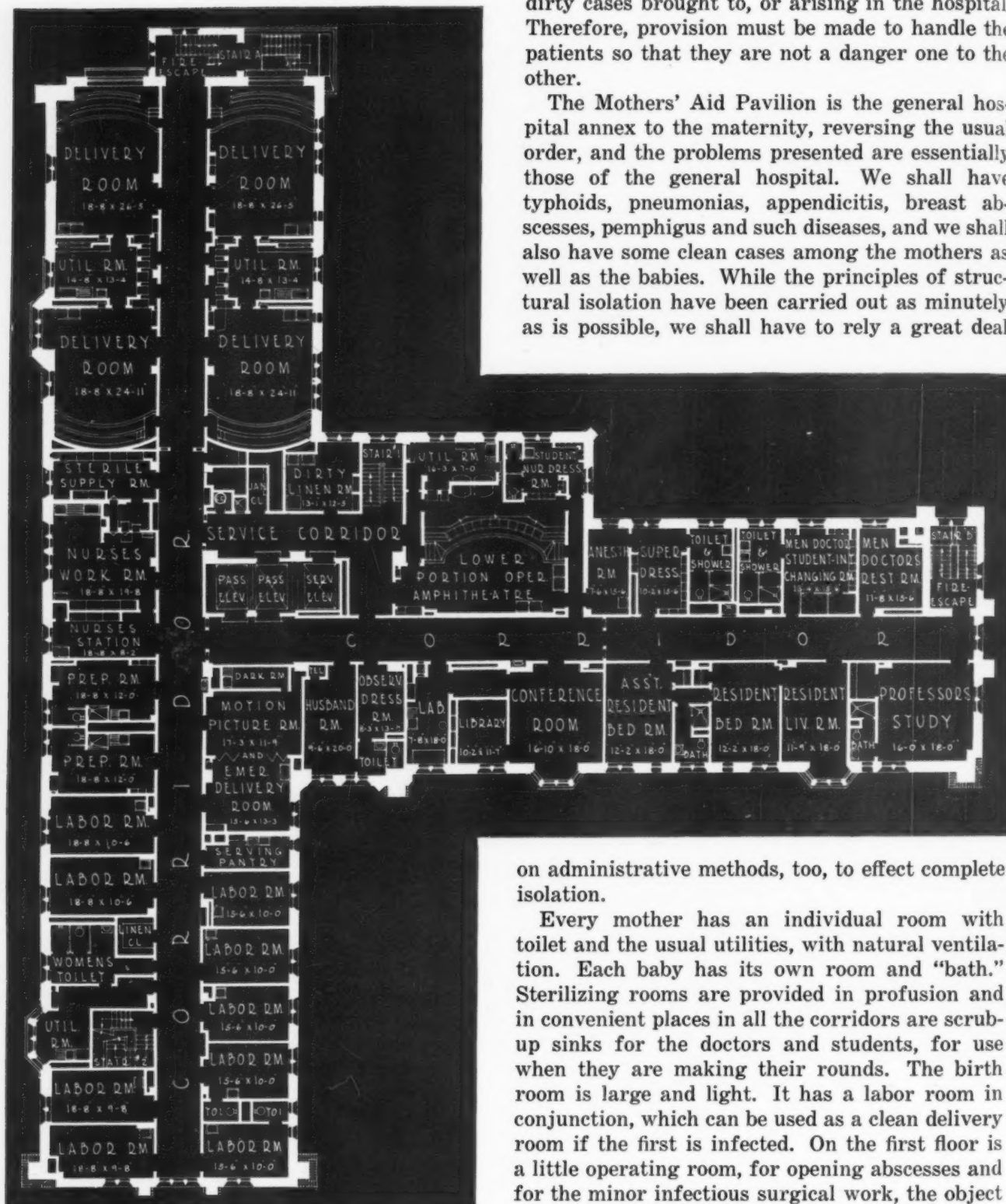
last in close proximity to the "Life and Death" department, many mothers' lives will be saved and many infants' deaths prevented.

Since motion pictures are taking a leading part in the teaching of medicine, adequate provision has been made to produce them. A small but completely equipped studio will enable us to film vaginal deliveries, and one of the birth rooms has been built so that in ten minutes it can be converted into a tiny Hollywood to film abdominal operations. Talking pictures have also been provided for. The apparatus, however, has not been installed, first because of the expense, and second because the art is still in its infancy and the changes in method and equipment are too rapid. We shall wait until a standard of excellence and practicality is reached.

The Function of the Mothers' Aid Pavilion

The sixth floor is devoted entirely to living quarters for the doctors, students, observers, anesthetists and superintendents of the hospital.

Much mention has been made of the Mothers' Aid Pavilion. It is the dumping ground of all the



The fifth floor, the birth room floor, contains four delivery rooms, nine labor rooms, an amphitheater and study and conference rooms for students and nurses.

dirty cases brought to, or arising in the hospital. Therefore, provision must be made to handle the patients so that they are not a danger one to the other.

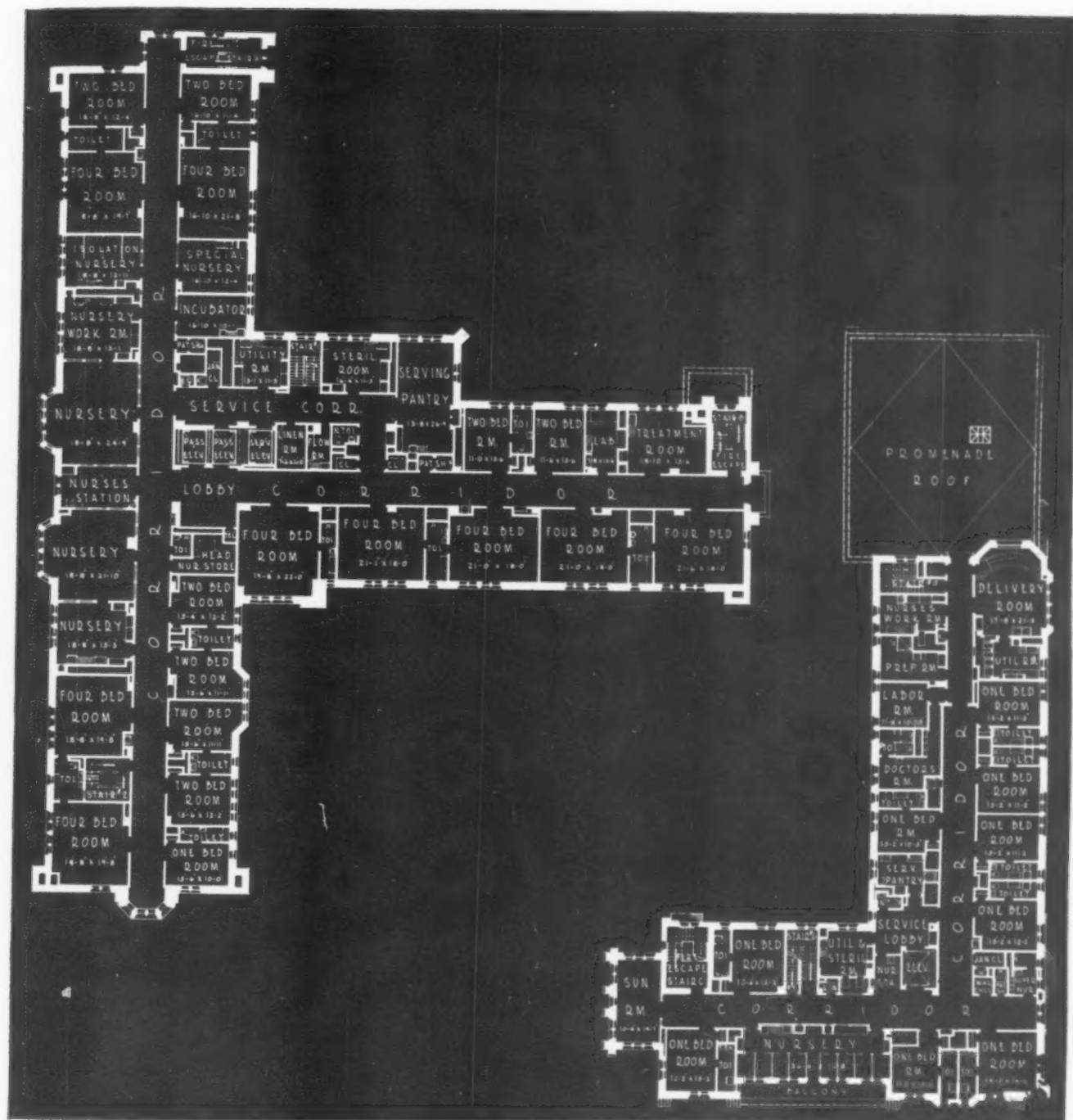
The Mothers' Aid Pavilion is the general hospital annex to the maternity, reversing the usual order, and the problems presented are essentially those of the general hospital. We shall have typhoids, pneumonias, appendicitis, breast abscesses, pemphigus and such diseases, and we shall also have some clean cases among the mothers as well as the babies. While the principles of structural isolation have been carried out as minutely as is possible, we shall have to rely a great deal

on administrative methods, too, to effect complete isolation.

Every mother has an individual room with toilet and the usual utilities, with natural ventilation. Each baby has its own room and "bath." Sterilizing rooms are provided in profusion and in convenient places in all the corridors are scrub-up sinks for the doctors and students, for use when they are making their rounds. The birth room is large and light. It has a labor room in conjunction, which can be used as a clean delivery room if the first is infected. On the first floor is a little operating room, for opening abscesses and for the minor infectious surgical work, the object being to keep the birth room as clean as possible.

Its own kitchen and laundry are distinguishing features of this building. I have been told that it is safe to have one kitchen and one laundry supply both clean and infectious wards and I would believe it if I could trust human nature and if I knew how to prevent carrier infection.

To substantiate the principle of limitation of



The third floor is the main maternity section for free and part-pay cases in wards of two and four beds. Two nurseries are provided, each with a bath.

the infection to its source, incinerators are provided in the birth room suite and on each floor. One on the balcony accessible from the outside is for the care of a particularly contagious case, such as scarlet or tetanus. Sun parlors and open balconies will enable us to carry out the outdoor treatment of both mothers and babies while they are in the hospital.

Since the Lying-in Hospital is affiliated with the University of Chicago, the practical and theoretic teaching of the department of obstetrics and

gynecology will be done within its walls. The university has constructed, in close connection with the Mothers' Aid Pavilion and the main hospital, a two-story school building. This houses the executive offices of the staff of the department and the laboratories—large laboratories for the students and smaller private ones for the professors and associates. A large library with files of all current journals dealing with our specialties is on the first floor. Two immense collections of books, the libraries of two eminent German pro-

fessors who recently died, have been donated to the department.

A lecture room, seating 140 persons, occupies a convenient position between the school and the hospital. It is named the Dora DeLee Hall and will be used for didactic lectures to the students and nurses, for "dry" clinics and demonstrations and for meetings of the boards of directors and

members of the organization and of the Mothers' Aid Club. This hall is fitted with motion picture projectors and will be supplied with talkie apparatus later on.

The school has been constructed so that eventually when the gynecologic pavilion is built north of it, the laboratories will be adjacent and available for the service of this new unit.

The New Hospital Reflects Seventeen Years of Progress

By CARL A. ERIKSON

Schmidt, Garden & Erikson, Architects, Chicago

RARELY is it given to the same group to construct two complete hospitals for the same purpose and of approximately the same size within a period of seventeen years. While there have been some changes in the group who planned the Chicago Lying-in Hospital, Chicago, it is substantially the same to-day as it was eighteen years ago. The president of the board of directors is Mrs. Kellogg Fairbank. The founder of the hospital and chief of staff, Dr. Joseph B. DeLee, the superintendent, Jessie F. Christie, and many of their associates are those who opened the present hospital.

Since the architects for both the new and the old group are the same, it seems fitting to compare an outstanding hospital project of fifteen years ago with one of to-day. Hospital building progress sometimes seems to proceed at a snail's pace and it is only by comparison of an existing building with one that is newly constructed, that we can measure how far and in what direction we have traveled. Perhaps, then, the most interesting thing that can be written about the new Lying-in Hospital is a comparison of the 1931 model with the 1914 model.

Basic Principle Is the Same

The affiliation with the University of Chicago and the desire to increase the advantages of that union were the primary reasons for the decision of the hospital authorities to build anew on the campus of the University of Chicago. The present buildings are in excellent condition and will be occupied by the Provident Hospital as soon as the Lying-in Hospital is moved into its new quarters. A description and plans of the present building

may be found in the June, 1915, issue of THE MODERN HOSPITAL.

As Doctor DeLee points out, there have been no deviations in the basic principle upon which the original group of buildings was designed. Complete isolation of suspected or infected mothers and infants in the isolation or Mothers' Aid Pavilion, separating them from the clean cases in the main hospital building, is maintained here as it was in the original group.

New Building Is Gothic

The site available does not differ greatly from the one on which the original buildings were constructed. The relationship between the isolation building and the main building is approximately what it was. Since there were no neighbors to be appeased, the orientation has been improved by turning the entire group ninety degrees so that the new main entrance faces west instead of south.

Between the new and the old buildings there is a marked difference in appearance. Since practically all of the buildings at the University of Chicago are of stone, that material is used in the new Lying-in Hospital. The Gothic characteristics of the university buildings have, of course, been followed in this group. The informal and picturesque qualities inherent in Gothic lent themselves fairly well to the rigid requirements of the plan. The grouping of the buildings from one to six stories in height and of various sizes is well shown in the accompanying illustration of the exterior.

In my comments on the plans I shall point out only the more important differences between this

building and the earlier buildings. The most noticeable one is the large space assigned to medical teaching. Approximately 91½ per cent of the entire group, or 200,000 cubic feet, is assigned to this work. The teaching rooms, laboratories, lecture halls, libraries, office and locker rooms are found between the main building and the isolation pavilion. In addition, teaching laboratories, demonstration rooms and other rooms are to be found on the second and third floors of the main building, in the out-patient department and on the birth room floor. On the sixth floor, housing is provided for both men and women students during their period of attendance on hospital cases.

Increased Dispensary Facilities

The dispensary facilities in the original buildings have been considerably enlarged to meet the demonstrated needs. This department will have practically the entire south wing on the first floor. A large waiting room, a number of small examining rooms, each with a pair of dressing booths, a large examination room for student demonstration, a room for postnatal instruction, offices and sterilizing rooms make this unusually complete. The hospital, however, carries on its dispensary service at a number of other places and it provides medical care for many home births. For both of these extramural services, it is necessary to prepare sterile materials, to care for instruments, to write records and to execute similar duties. This is adequately cared for in the new building in the home service section east of the elevators on the first floor of the main building.

There has been a slight increase in the areas designed for the reception of visitors and for the waiting rooms. The reception lobby on the first floor is primarily a vestibule in which the various groups entering the hospital will be sent to the proper section by the hostess directly opposite the entrance. The visitors' waiting room is conveniently close to the reception hall and the elevators, but it is semi-isolated. Visiting in private rooms as well as in wards is limited and carefully supervised. Adjoining is a private waiting room. A somewhat larger space is assigned to the administrative offices at the north end of the first floor.

Better facilities are afforded for the reception and discharge of patients. A useful feature is the waiting room and adjoining examining rooms for the full-time professor of obstetrics.

The 120 beds in the main building of the present hospital are divided among four floors with a maximum of thirty-seven patients on any one floor. In the new hospital the 137 beds in the main building are distributed on three floors—

the second and third for wards and the semiprivate cases and the fourth for private patients. This increases the number of patients on each floor, one floor housing fifty patients. Naturally, this increase in the number of patients on each floor has necessitated larger service adjuncts. Further, it was early determined to better the service as much as possible. An examination of the service section will indicate the most radical innovation on the patients' floors, the service corridor. The serving pantry, the sterilizing room, the utility room, the janitor's closet, the linen room and the nurses' toilet open from this corridor. They are equally accessible to each wing of the T-shaped plan. It is intended that this service corridor shall be used for practically every purpose, but not by visitors, who will use the main corridor. Two of the three elevators discharge into this service corridor. The third one is intended solely for the visitors, discharging them directly in front of the nurses' station and opposite a small visitors' waiting alcove.

The visitors can thus enter the hospital without meeting the patients going to the birth rooms or to the x-ray rooms and without being embarrassed by the hospital routine. The introduction of this corridor will also reduce the noise and confusion sometimes found in the busy hospital unit.

The nurses' station has an outside window and is larger and more completely equipped than that in the present building. The nurseries, one on the second, one on the fourth and two on the third floor are much more liberal in size than are those in the present building. Each baby is assigned twenty square feet. The laboratory and treatment rooms on the second and third floors are additions to the more intensive use of the hospital for teaching and research.

Unmarried Mothers Not Overlooked

A feature of the new building not found in the old is the surgeon's scrub-up sinks. There is one in each wing of the patients' floor so that the surgeon may completely scrub if necessary before and after visiting each patient. These are in alcoves off the corridors.

Dumb-waiters have been entirely eliminated for any service. Food service will be by electrically heated carts from the main kitchen by way of the freight elevator.

The original building contains many toilets, although there is not quite one to every room. The new building has a toilet room adjacent to every patient. But these new toilets—they might rather be called service rooms—are more completely equipped than are those in the present building.

TABULAR COMPARISON OF THE MATERIALS AND EQUIPMENT USED IN THE NEW AND OLD BUILDINGS

	<i>Old Building</i>	<i>New Building</i>
General Hospital.....	Terrazzo floor and base. Plaster walls and ceiling. Legless radiators. Concealed piping. Wood trim. Coved re-entrant corners.	Same, but with flush metal steel trim. No cove at corners except in base.
Patients' Toilets.....	Same as above.	Same, but with a 5-foot tile wainscoting.
Corridors	Same as above.	Same, but with sound absorbent ceilings, and a 4-foot wide strip of rubber floor. Ceiling broken by arches.
Service Rooms.....	Same as above except for tile floor in sterilizing rooms. Open into hospital corridor.	Added sound absorbent ceilings, 5-foot tile wainscotings. Tile floor in utility and sterilizing rooms. All open on service corridor.
Cases	Metal.	Metal with a great deal of noncorrosive metal used for shelves, etc.
Birth Rooms and Nursery Workrooms	Tile wainscot and floor. Ohio flint tile floor. Hard plaster ceiling.	Same. Terrazzo floor and tile wainscot. Sound absorbent ceiling. Vacuum outlets. More convenience outlets. Cardio and compressed air in birth room.
Nurseries	Terrazzo floor and base. Plaster ceiling. D. S. A. A. glass.	Same. Sound absorbing ceiling. Ultraviolet glass.
Laundry	Cement floor.	Cement floor. Glazed brick walls. Soundproof ceiling.
Kitchen	Terrazzo floor and plaster walls and ceiling.	Quarry tile floor. Enameled brick walls. Sound absorbent ceilings.
Movie-Talkie Pictures:		
Recording	None (except with superficial equipment lately installed).	1 Operating amphitheater. 1 Cesarean room. 1 Delivery room. 1 Lecture room.
Reproducing	None.	
Elevators	One manual and two push button—speed of 150 feet.	One manual. Three selective automatic control. Speed 250 feet.
Patients' Baths:		
Private and Public.....	Tubs.	Showers.
Toilet Rooms Adjoining Patient Rooms		Equipped with marble work counter with noncorrosive metal shelves.
Janitors' Closets	Enameled iron sink.	Built-in tile sink at floor.
Patients' Rooms Closets.....	Terrazzo floor at same elevation as room floor.	Terrazzo floor and base.
Flower Room	None.	Tile wainscoting with acid resisting sink.

	Old Building	New Building
Doctors' Wash Sinks.....		At intervals in recesses in corridors.
Sterilizing Rooms:		
Patients' Floors (Utility Rooms)	Sterilizers in open room.	Built-in noncorrosive metal and plaster hood over recess for sterilizers; tile wainscoting.
	Movable worktables. No refrigerator.	Built-in noncorrosive metal work counters. Built-in refrigerators.
Service Corridor	None.	Built-in brick linen waste can receptacle. Recess for waste paper press.
Pneumatic Tube	None.	To all nurses' stations and department offices.
Labor Rooms	Several two-bed.	All one-bed. Sound absorbing ceiling.
Birth Rooms	One with spectators' seats.	Spectators' seats.
Sterilizers (Throughout Building)	Open sterilizers in room. Boiling or nonpressure sterilizers for utensils and instruments.	All built-in sterilizers in tile recesses with built-in hood over. Pressure sterilizers.
Patients' Room Doors.....	3 feet 4 inches wide with transom over.	4 feet wide with two hinged panels in door.
Roofs	Quarry tile wherever at level with patients' rooms.	Quarry tile wherever at level with patients' rooms.
Windows in Patients' Rooms.....	Double hung with section of hinged transom over. Wood trim.	Double hung. Plaster trim marble steel.
Deflector Hoods		Noncorrosive metal over all hot plates.
Tile Wainscoting	Projecting beyond plaster above.	Flush with plaster.
Emergency Distilled Water.....	None.	Small apparatus set into built-in metal case.
Ethyl Tank Case.....	None.	Built-in brick lined case vented to out of doors.
Drying Cabinets	None.	Built-in metal case with pipe coils vented to mechanical ventilating system.
Blanket Warmers	None.	Built-in.
Glove Dryers	None.	Silent and mercury.
Night Lights	None.	Provision throughout.
Switches	Usual type.	
Radio	None.	
Material Used in Piping:		
Service:		
Sterile Water	Tin lined wrought iron.	85 per cent nickel.
Waste and Vent Stack.....	Galvanized steel.	Galvanized wrought iron.
Chemical Table Branches.....	Galvanized steel.	Acidproof pipe.
Hot Water	Galvanized steel.	Galvanized wrought iron.
Cold Water	Galvanized steel.	Galvanized wrought iron.
Concealed Branches From Plumbing Supplies	Steel pipe.	65 per cent copper.
Heating Lines	Steel pipe.	Wrought iron.
Intermediate Steam Supply	Steel pipe.	Concealed copper exposed wrought iron.
Heating Returns	Steel.	Copper.
Intermediate Returns	Steel.	Copper.

For every pair of four or two-bed rooms, there is a service room with two wash basins, a water closet that can be used also as a bedpan cleansing sink and a nurses' worktable with shelves below and an electric connection above for sterilizer installation or other heat using equipment. Every private room has its own private toilet, and many of them have showers.

The workrooms and the adjoining ten beds on the northeast wing of the second floor are intended for the unmarried mothers. The corresponding space on the third floor is assigned to the wet nurses and their babies. Otherwise the third floor does not differ from the second except that there are two complete nurseries and workrooms to care for the greater number of babies that will be cared for on this floor. The second floor enjoys a considerable area of roof promenade over the first story portion of the Max Epstein Dispensary. The fourth floor is devoted solely to private rooms of varying sizes. A special duty nurses' lounge has been added to the service adjuncts of this floor.

In the present building, the birth and labor rooms for the ward patients are in one wing and for the private patients in another wing, with the services common to both centrally placed. It was recognized that the Colonel's Lady and Judy O'Grady were very much alike on this "Life and Death" floor. Therefore, efficiency of operation placed all of the birth rooms in one group in the north wing and all of the labor rooms in another group in the south wing. Between the two and in the east wing are the necessary adjuncts.

There are four birth rooms in this building, the same number as are in the present building. The large amphitheater and combination moving picture studio and spare delivery room really make two additional delivery rooms. All of the labor rooms in this building, of which there are nine, are for one patient only.

Studio for Talking-Moving Pictures

An important addition to the facilities of the birth room floor are the conference room, the library and the laboratories. The husbands' room, a popular feature of the present building, is retained. The motion picture studios are a new department for hospitals. Of course, the practice of taking motion pictures in the hospitals has been established for some time but almost all of it has been done under a makeshift arrangement. The studio in the Lying-in Hospital has been designed for the taking of talking-moving pictures, and it has the wiring and other facilities now considered necessary for such work.

More liberal provision is made in the new

building for the locker and toilet facilities for the attendants as well as for the housing of the professors.

Access to the amphitheater is from the sixth floor, thus obviating the necessity for troops of students to enter the birth room floor. This is in addition to the entrance from the fifth floor and the service corridor. The elevator lobby leads to the men's quarters on the west side and the women's quarters on the east side. There has been a considerable increase in the number of personnel and students to be housed in this building as compared with the earlier one. Thirty-two persons are housed largely on the sixth floor. These are the executive staff of the hospital, the residents and the interns and students. The present hospital building cares for about seven or eight. On both sides of the personnel quarters are promenade decks that may be used as open air recreation spaces. In the upper floors of the tower are the usual fans and the necessary elevator machinery.

"Almost Human" Elevators

The elevators in the present main building are one push button and one car switch control. The service elevator in the new building has a car switch control but all other elevators are selective automatic control with car leveling devices. These elevators are almost human in their action. If the elevator is moving upward, it stops at all floors to pick up calls going upward, or vice versa. An emergency key is provided so that an elevator may be called to the floor to take care of an emergency patient regardless of all other calls that may be made at the same time or subsequently.

The fine assistance rendered the hospital by the Mothers' Aid Society, a group of women who not only raise money for the hospital but who prepare bandages and linen, has been more adequately recognized in the new group than in the old. A Mothers' Aid workroom has been included in the southwest corner of the first floor of the isolation building. The rest of this floor is taken up by the administrative offices and the reception room, and at the north end by the teaching department, the offices and the lecture hall.

The second floor of the Mothers' Aid Pavilion building has at the north end several classrooms and laboratories. South of the partition across the corridor, however, it is similar to the present building. The toilet rooms are larger and are equipped with a laundry tub for soaking and disinfecting linen in addition to the equipment to be found in the main building.

On a smaller scale, a service lobby is provided

for the serving pantry and for the utility and sterilizing rooms of this building.

Better provisions are made for the nursery in this new isolation building than in the old. Tiny private rooms are provided for the babies in this building, all of the rooms having the necessary auxiliary facilities. The open air balconies adjoining this nursery as well as the balcony on the third floor should be of value.

The new buildings do not include some of the facilities of the present group. Since high pressure steam will be supplied by the university, there are no boiler rooms. Provisions for feeding almost all of the personnel of this hospital have been made elsewhere in the university group. Therefore, only two small dining rooms are provided for emergencies when the staff cannot leave the building.

Liberal locker and toilet rooms for the various classes of help are in the basement. The great increase in storage space over the present buildings should also be noted.

A pneumatic tube system is provided for transmitting records and for sending drugs to and from the floors. An interesting feature of this new group is the absence of any bathtubs except in the personnel quarters. The reasons are obvious. Another interesting device, which we believe has been introduced for the first time in this group, is the preparation shower in the birth department. Many are familiar with the preparation slab used in the birth department and first introduced in the original Lying-in Hospital. In the new Lying-in Hospital the patient will be bathed standing up, that is, given a shower. Further necessary preparations will be made on a table. Another interesting device, used here for the first time, is the horizontal water sterilizer. The pass-through type of dressing sterilizer in the main sterilizing room on the fifth floor should also be noted. The dry water closets in the preparation room are of interest. For obvious reasons these will not have the usual standing body of water but will be dry.

Comparing the New and Old Buildings

The capacity of the new building is 157 beds. There are 2,100,000 cubic feet in the group. The present buildings care for 143 patients, fourteen less than the new building, but the contents of this group are but 1,173,000 cubic feet. The great increase in cubic contents is explained by the Medical School adjuncts, the increased facilities for the care of patients and the larger out-patient department. All features better the service to the patients and to the community.

Generally speaking the changes are due to the

introduction of new materials that were not available when the present structure was built, such as rubber flooring and sound absorbing materials in the corridors. Other changes are due to the failure of the material originally selected to do the work. This applies especially to some of the piping materials. Other changes are due to a desire for easier and less expensive maintenance and include such items as the more extensive use of tile in this building than in the old one.

A tabular comparison of the materials and equipment used in the new and old buildings is presented in the foregoing pages.

Advantages of a Time Clock in the Hospital

A general belief exists that since a hospital represents a philanthropic and humanitarian effort, efficiency methods, without which a business could not exist, may be neglected here with impunity. Here and there in the hospital field may be found institutions that have installed a time clock system and have made it apply to all employees, and even to the members of the visiting staff.

If a time clock is used in the hospital, it means that records may be more accurately kept. The completion of the semimonthly or monthly pay roll is aided materially by the use of monthly time cards. The keeping of employees' time is usually a slipshod procedure in the hospital. Heads of departments frequently are required to keep time books, but they are prone not to make these records daily, but to try at the end of a week or a fortnight to recall the absences during this period. Such records are worthless and have a tendency to generate extravagance.

Many institutions are handicapped by too many exits. A time clock placed at the most convenient of these would stimulate employees to leave the institution always by this door or gate. They soon come to understand that unless they do this, they receive no credit for each day's work.

Promptness is encouraged by an impartial yet accurate recording of the time of arrival and departure of each worker, and the impersonal basis upon which such procedure is thus placed obviates disputes and misunderstandings. In some outstanding institutions, every member of the hospital personnel, including the visiting staff and the superintendent, records the time of his arrival at and his departure from the institution.

Although such equipment is expensive, it soon pays for itself. A raising of morale and of efficiency is the natural result of such an installation.

Are Your Elevators Adequate in Size and Number?

By CHARLES F. NEERGAARD

and

R. N. BROUGH

New York City

CALLERS at a certain hospital in New York City just before visiting hours will see an interesting sight. At the main entrance people will be arriving in considerable numbers. Some will be allowed to pass but many will be turned away by an attendant. Soon it will be clear that he is trying to persuade visitors to ward patients to use the side entrance around the corner but is having considerable difficulty in doing so because ward visitors are not so labeled. Some deliberately refuse to follow his instructions, stand firm and block the increasing traffic. The scene is confusing.

Around the corner at the ward visitors' entrance a group of perhaps seventy-five to one hundred people will be seen, waiting for admission. The weather may be good, bad or worse. The rain may be falling in gusts; the temperature may be icy. Regardless of the weather, the people must stand until the hour arrives when the doors are opened. There is no shelter. This scene is depressing because it evidences apparent

indifference to the comfort of visitors. How many of them will suffer while waiting? How many will feel resentment toward the hospital for what appears to be inconsiderate treatment?

The difficulty is that the hospital has been unable to devise a better way of handling visitors because insufficient thought was given to the problem when the hospital was built. The 400 patients have about 800 visitors each day, yet the only space allotted for their reception is one small room. No lobbies or waiting rooms have been provided.

This is an extreme case in a very old building (incidentally, not one of the hospitals here mentioned), yet it illustrates the lack of attention to the proper handling of visitors too frequently found even in some of our newer hospitals.

To determine what would constitute adequate space, convenient arrangement and sufficient elevator capacity for the reception of visitors in a multi-story hospital soon to be erected in New York City, a study was made of the methods of

TABLE I—HOSPITALS JOINING IN STUDY

	<i>No. of Stories</i>	<i>Bed Capacity</i>	<i>Average No. Patients on Days of Study</i>
<i>New York City Hospitals</i>			
New York Post-Graduate Medical School and Hospital	10	412	339
Neurological Institute	14	212	177
New York Nursery and Child's Hospital	11	263	215
Carson C. Peck Memorial Hospital, Brooklyn	6	110	70
Total	997	801
<i>Suburban Hospitals</i>			
Beth Israel Hospital, Newark, N. J.	11	376	276
Homeopathic Hospital, East Orange, N. J.	5	120	96
Orange Memorial Hospital, Orange, N. J.	6	388	249
Presbyterian Hospital, Newark, N. J.	6	314	160
Total	1,198	781

TABLE II—ESTIMATES OF TOTAL NUMBER OF PERSONS ENTERING HOSPITALS DAILY

<i>Hospital</i>	<i>Patient Visitors</i>	<i>Nurses and Employees</i>	<i>Doctors</i>	<i>Patients Admitted</i>	<i>Miscel- laneous Visitors</i>	<i>Total</i>
Neurological Institute	400	350	50	15	200	1,015
New York Nursery and Child's Hospital	505	350	75	15	25	1,070
Carson C. Peck Memorial Hospital, Brooklyn	175	115	50	5	50	395
New York Post-Graduate Medical School and Hos- pital	750	650	125	30	160	1,715
New York City Total ..	1,830	1,465	300	65	435	4,195
Beth Israel Hospital	1,025	600	125	30	250	2,030
Homeopathic Hospital	200	135	40	6	50	431
Orange Memorial Hospital .	725	375	60	25	125	1,310
Presbyterian Hospital	550	240	70	75	15	950
Suburban Total	2,500	1,350	295	136	440	4,721
Grand Total	4,330	2,815	595	201	875	8,916

handling visitors in eight representative hospitals, four in New York City and four in its suburbs. The purpose of the study was to determine (a) the number of visitors daily; (b) how they might best be received, controlled, distributed, and made comfortable while waiting; (c) the number and size of elevators required to carry the hospital's normal traffic as well as visitors.

The hospitals joining in the study are listed in Table I.

None of the records of the American Hospital Association or other authoritative agencies contained material bearing on this subject, so that

an investigation seemed necessary to bring out the facts, and perhaps afford data on which principles might be based.

The difficulties of the study were realized before the task was undertaken. Some hospitals have been so designed or have so grown that visitors may enter at several doorways. Many visitors do not understand the problems of hospital management and strongly resent any system of control. Foreigners or persons of foreign extraction are usually the most troublesome in this respect. For these and other reasons it was not easy to secure absolutely accurate counts.

An observer spent one or two days at each

TABLE III—NUMBER OF VISITORS PER PATIENT AND PER BED

<i>Hospital</i>	<i>Visitors</i>	<i>Beds</i>	<i>Patients</i>	<i>Visitors Per Bed Capacity</i>	<i>Visitors Per Patient</i>
Neurological Institute	1,015	212	177	4.8	5.7
New York Nursery and Child's Hospital .	1,070	263	215	4.3	5.0
Carson C. Peck Memorial Hospital, Brook- lyn	395	110	90	3.0	4.4
New York Post-Graduate Medical School and Hospital	1,715	412	339	4.2	5.0
New York City Total	4,195	997	821	4.5	5.1
Beth Israel Hospital	2,030	376	276	5.4	7.4
Homeopathic Hospital	431	120	92	3.6	4.7
Orange Memorial Hospital	1,310	388	249	3.4	5.7
Presbyterian Hospital	950	314	160	3.0	5.9
Suburban Total	4,721	1,198	777	4.0	6.1
Grand Total	8,916	2,195	1,598	4.2	5.6

hospital counting the number of visitors and observing the elevator traffic to determine the number of patients admitted and discharged; the doctors calling; the number of visitors to private, semiprivate and ward patients, as well as miscellaneous persons who called at the hospital.

The endeavor to classify visitors to patients proved a failure. There seemed to be no practical way of dividing them according to the hos-

were excluded, because they use elevators little or not at all.

The estimate of visitors (including nurses and employees) per patient and per bed are shown in Table III.

The figures of visitors per patient are obviously the significant ones. They show larger visitation in the suburbs, as expected. This is because as a rule the visiting rules are not so

TABLE IV—RESTRICTIONS IMPOSED ON VISITORS IN EIGHT HOSPITALS STUDIED

Hospital	Ward	Semiprivate	Private	No. Allowed to Visit a Patient at One Time	Children Under 12 Years Permitted to Visit
Neurological Institute	9 a.m.-9 p.m. public—daily	9 a.m.-9 p.m.	9 a.m.-9 p.m.	Restricted by nurse	No
New York Nursery and Child's Hospital	4 hrs. weekly private 4 hrs. daily	11 a.m.-9 p.m. daily	11 a.m.-9 p.m. daily	2	No
Carson C. Peck Memorial Hospital, Brooklyn	2 hrs. daily	2-4 p.m. daily 7-8 p.m. daily	10 a.m.-9 p.m. daily	2	No
New York Post-Graduate Medical School and Hospital	8 hrs. weekly	1-2 p.m. daily 7-8 p.m. daily	10 a.m.-9 p.m. daily	2	No
Beth Israel Hospital	7 hrs. weekly	2-3 p.m. daily 7-8 p.m. daily except Sunday	1-8:30 p.m. daily	Restricted by nurse	Yes
Homeopathic Hospital	2 hrs. daily	2-4 p.m. daily 7-9 p.m. daily	10 a.m.-9 p.m. daily	2	No
Orange Memorial Hospital	5 hrs. weekly	2-4 p.m. daily 7-9 p.m. daily	2-9 p.m. daily	Restricted by nurse	Yes
Presbyterian Hospital	2 hrs. daily	2-4 p.m. daily 7-9 p.m. daily	11 a.m.-9 p.m. daily	2	No

pital divisions of ward or private when the patients were not so segregated in separate buildings. In all statistics the visitors have been considered as one group.

Because of the difficulties already indicated and because of day to day fluctuations in visitation due to conditions outside the hospitals, all data presented are subject to the criticism that they may not be strictly accurate, yet the figures are at least suggestive and approximate.

Estimating Daily Entrants

The counts or estimates made of the total number of persons entering the hospital daily, based on average figures, are shown in Table II.

In making these estimates a person entering the hospital more than once during the day was counted each time he entered. Clinic patients

strict as in the New York City hospitals and the patients live closer to the hospitals. It is well known that the New York City patients come from a large geographical area.

Divergent views were expressed by the hospital executives regarding the proper methods of handling visitors. As previously stated, the New York City hospitals had the strictest rules. All four of them had distinctly limited visiting hours, and excluded as visitors children under twelve years of age. Three of them did not permit more than two visitors at a time to a patient except in a private room. Two of the suburban hospitals had similar restrictions. The others felt that because of local conditions they could not put all of these limitations into effect, though they would like to do so. The data are shown in Table IV.

TABLE V—AVERAGE DAILY ELEVATOR TRAFFIC

<i>Hospital</i>	<i>Stories</i>	<i>Actual Patients</i>	<i>Number Elevators</i>	<i>Average Daily Total</i>	<i>Persons Using Elevator Per Patient</i>
Neurological Institute	14	177	3	3,600†	20
New York Nursery and Child's Hospital	11	215	2	2,350	11
Carson C. Peck Memorial Hospital, Brooklyn .	6	90	2	1,050	11
New York Post-Graduate Medical School and Hospital	10	339	4	4,500	13
Beth Israel Hospital	11	276	4	4,300	16
Homeopathic Hospital	5	92	2	750*	8
Orange Memorial Hospital	6	249	4	2,525*	10
Presbyterian Hospital	6	160	3	2,075	13
		1,598	24	21,150	13

† Nurses' home on top floors, increasing the volume of traffic.

*A large number of ward visitors walk in preference to using elevators.

At five of the eight hospitals, visitors were controlled by an employee at the information desk. Two hospitals employed hostesses for the purpose, who greeted visitors pleasantly, answered their questions and extended special courtesies to them.

In the course of the study the number of persons using each elevator in the various hospitals was recorded and charted. The following observations were made: (1) Elevator traffic becomes a problem only in hospitals of more than 150 patients or more than five stories. (2) In such hospitals elevator traffic becomes a problem only during periods of peak loads, such as visiting hours.

On the basis of the rather limited counts made, the average daily elevator traffic was estimated. The results are shown in Table V.

This table illustrates the general trend, that is, an increase in elevator traffic as the number of stories increases.

No accurate formula for estimating the

amount of elevator traffic can be worked out for a building of a given size and type as the volume is greatly affected by (a) location of the building, (b) the rules and methods of controlling visitors, (c) the location of the wards, (d) the efficiency of the elevator service and (e) the number of clinic patients, as where there is a large outpatient department, a portion of the clinic patients use the elevators to reach laboratories, the therapy department or other services not adjacent to the clinic.

What Is Wrong With Elevator Service?

The hospital world has apparently produced few hospitals really contented with their elevator service but unfortunately little can be done toward the improvement of this service after the elevators have been installed. Perhaps the dissatisfaction is partly due to the fact that the average person is impatient and is irked whenever an elevator is not awaiting his convenience. Such an ideal condition is obviously impracticable.

TABLE VI—DIMENSIONS AND TYPES OF ELEVATORS USED

<i>Hospital</i>	<i>Number of Elevators</i>			<i>Type</i>	<i>Size of Car</i>
	<i>Passenger</i>	<i>Service</i>	<i>Combined</i>		
Neurological Institute ...	2	1	..	Manual	5'9"x6'9"
New York Nursery and Child's Hospital	1	1	..	Manual	4'6"x6'6"
Carson C. Peck Memorial Hospital	1	1	..	Manual	6'0"x6'9"
New York Post-Graduate Medical School and Hospital	2	1	1	Manual	Var. 4'3"x6'9", 5'9"x8'9"
Beth Israel Hospital	2	1	1	Manual	4'11"x6'3"
Homeopathic Hospital ...	1	1	..	Self-service	5'3"x8'0"
Orange Memorial Hospital	2	1	1	Manual and self-service	4'6"x7'6"
Presbyterian Hospital ...	2	1	..		4'0"x7'0"

Each of the hospitals studied made complaint about its elevators. The faults found were:

	Hospitals
Elevators badly placed	2
Elevators too small	3
Elevators too slow	4
Elevators too noisy	1
Self-service elevators not satisfactory ..	3
Operator must go to basement to switch cars from push button to manual control. Switch should be in the car	1
Service work interferes with passenger service	1
Elevator operators not satisfactory	1

No uniformity as to size of elevator cars was apparent. Table VI lists the dimensions.

In analyzing the criticisms made with a view to avoiding mistakes if new construction were undertaken, the following conclusions were reached: The minimum size of elevator cars should be 5 feet 6 inches by 8 feet to permit convenient handling of stretchers and food trucks. So that noise from doors and motors and noisy contacts will not annoy patients, elevators should not open directly on corridors unless particular care is taken to use machinery and doors that will operate quietly. Automatic or self-service elevators are not suited to large hospitals except for night service. Provision should be made for manual operation with full control by the operator. Automatic floor leveling devices should be installed. It is unfair to annoy fracture or nervous patients with an out of line elevator and bump them when entering or leaving elevators on stretchers or in wheel chairs. When central food service is used and trays are delivered in trucks, self-leveling elevators are imperative.

At least one passenger and one service elevator of appropriate size and design, properly placed, are required in each hospital of the multi-story type of 100-bed or more capacity. Under such conditions and with proper control of visitors each passenger elevator may care for about 150 patients. If the building has more than ten stories, an additional elevator should be provided to be used for both passengers and service.

Should a Patient Be Sent Home Before His Bill Is Paid?

What is the best method of preventing patients from leaving the institution without having settled their accounts?

This question also has another angle that is important. Unless the clinical records of a patient

are completed before he is permitted to leave the institution, there is little chance that accurate and detailed information will later find its way onto the chart. No patient, unless perhaps the private patient, should leave the hospital until there have been carefully compiled all data relating to the history, physical examination, laboratory and other scientific studies made during the patient's stay in the hospital. A visé of the clinical record, therefore, should be made by a competent and careful medical officer before the patient is permitted to be discharged. The moral effect upon members of the resident and intern staffs of knowing that no chart will be approved for discharge until it is complete, is certainly beneficial.

In some hospitals, a great deal of difficulty is experienced in preventing an embarrassing situation from arising because the friends or relatives of a patient have not been informed that it is necessary for them to meet certain financial obligations before the patient may be discharged. Usually, when a ward or room card is used, a financial approval is required by the business office before a patient is permitted to leave the institution. This card may be sent to the office for approval while the patient is being made ready for his departure. Thus sufficient time is given for the relatives to pay the bill before the patient is actually ready to go home.

The policy of preventing the discharge of patients before their bills are paid is a practical one. It is more difficult to secure a prompt settlement of a financial obligation after the patient has reached his home than before he has left the hospital. Financial approval for discharge, therefore, is of the greatest importance. But neither must medical approval be slighted.

The Progress of Social Work in the United States

A record of organized efforts in the United States to deal with social problems is presented in the "Social Work Year Book" for 1929, compiled and published by the Russell Sage Foundation. The year book also includes a descriptive roster of 452 national agencies either doing or assisting in social work in this country. This is the first comprehensive periodical record of the varied activities of social work that has been compiled and the Russell Sage Foundation has undertaken the task with "a belief that the progress of social work will be advanced thereby, its unity increased and popular understanding of its aims enlarged."

Planning for Out-Patients in a Southern Teaching Hospital

By EDWARD RANDALL, M.D.

President, Board of Managers, and

LUCIUS R. WILSON, M.D.

Superintendent, John Sealy Hospital, Galveston, Tex.

THE out-patient building of the John Sealy Hospital, Galveston, Tex., is the first clinical unit of the building program of the board of the Sealy and Smith Foundation for the John Sealy Hospital.

The John Sealy Hospital was erected in 1890 in accordance with the will of John Sealy, Sr., which provided a bequest of \$50,000 for the establishment of a charity in Galveston. Mr. Sealy's widow and brother decided upon a hospital as the most needed institution to comply with the bequest, and Mrs. Sealy added a sufficient amount of money to the original bequest to erect a hos-

pital that would meet the needs of the community at that time.

After the hospital was put in operation, it continuously needed financial help to meet the deficits in operation, for repairs to the building and to increase the hospital's capacity as the demands of the community increased.

These financial burdens were assumed by the son and daughter of the founder of the hospital, John Sealy, Jr., and Mrs. R. Waverley Smith. As the hospital grew and rendered greater service to the needy sick of Galveston, their interest in this charity increased, and in order that sufficient



The walls of the foyer have a faïence tile wainscot in various shades of tan and brown. This picture shows the registration desk on the left and the grilled windows of the pharmacy on the right.

funds should be available at all times for the hospital's needs, they organized the Sealy and Smith Foundation for the John Sealy Hospital and contributed generously to it.

After the death of John Sealy, Jr., on February 19, 1926, it was learned that his will directed that his estate, after certain bequests to relatives and friends, was to be given in trust to the Sealy and Smith Foundation.

With the money thus made available the board of the Sealy and Smith Foundation meets the deficit on hospital operation and places the remainder in the building fund. Because the present hospital buildings are quite old and do not satisfactorily fulfill the hospital needs, the board is planning a building program that will provide care for the sick of the community in line with that provided by modern hospitals everywhere.

A survey of the hospital facilities showed that a new power plant, a laundry and an out-patient building were most urgently needed. The University of Texas, because of the hospital's connections with the medical school, offered the services of R. L. White, the university's supervising architect, who designed and superintended the erection of these buildings.

The new power plant and laundry were put in operation January 4, 1929. The total cost of the building and equipment was \$250,000. Both the

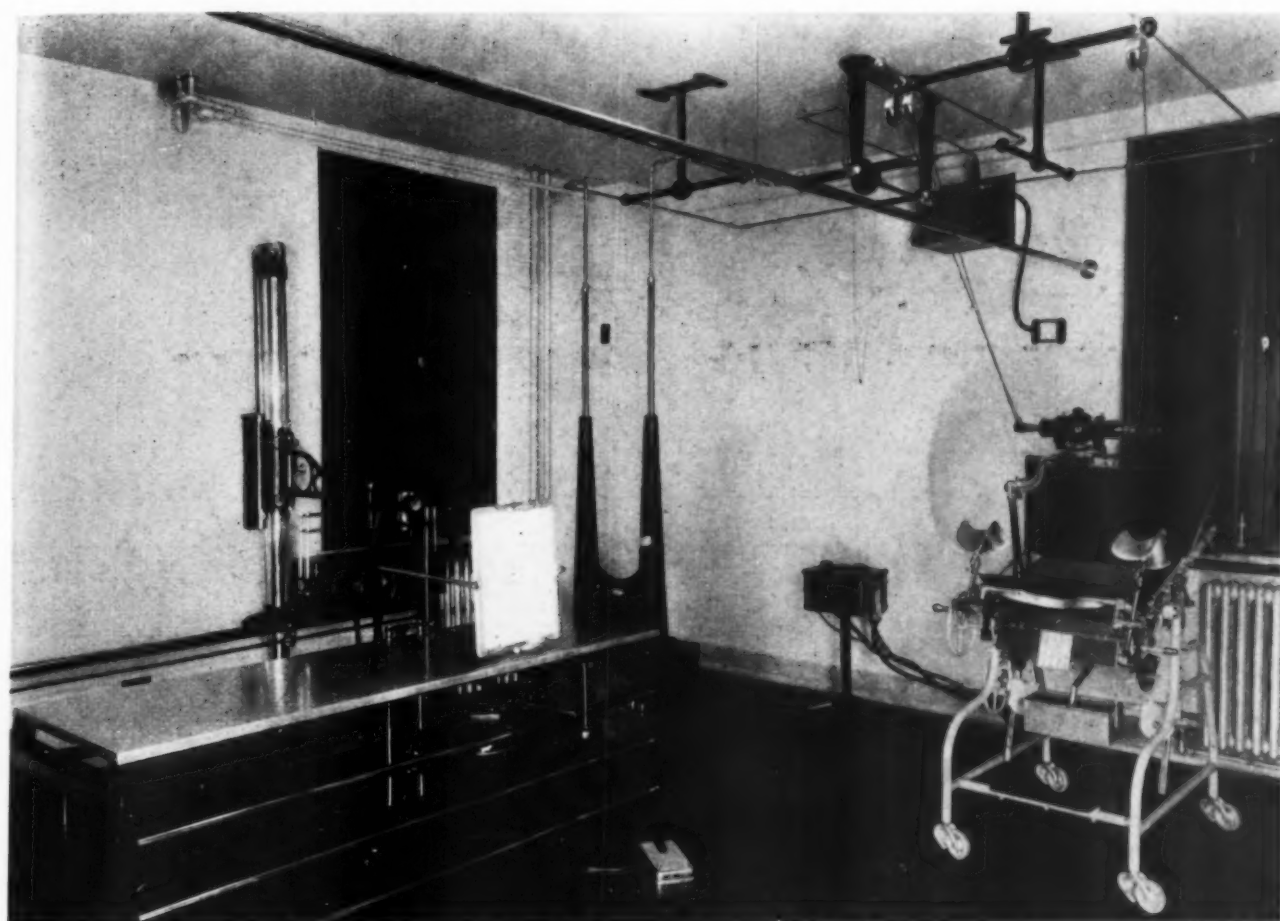
power plant and the laundry were built with adequate provisions for the future development of the hospital.

While the power plant was under construction, plans for the new out-patient building and nurses' home were being formulated. Dr. C. G. Parnall, superintendent, Rochester General Hospital, Rochester, N. Y., was asked to serve as consultant for this work. Because of the crowded conditions in the present building and particularly because the out-patient building is to be a unit of a new hospital to be built in a few years, it was found advisable to provide accommodations for the hospital's clinical laboratory, the x-ray department, the mortuary and the record room in the new building. The medical school needed additional space to take care of the junior and senior classes in clinical pathology, and since the hospital's clinical laboratory was to be in the new building, it seemed advisable to increase its size so that laboratory space adjacent to the hospital's laboratory could be provided for this work. The board of regents, University of Texas, made an appropriation of \$50,000 to equip the building to offset the expense to the Sealy and Smith Foundation for this additional space.

A building of no small proportions was required to provide accommodations for these various features in addition to adequate space for the care



This laboratory is used for the examination of routine specimens from hospital patients.



The two tables in the fracture and genito-urinary x-ray room are operated with one x-ray machine.

of out-patients. The Sealy and Smith Foundation owned a plot of land across the street from the present hospital plant and was able to purchase the remainder of the block as a convenient site for the building. The city of Galveston deeded to the Sealy and Smith Foundation three blocks of streets that were within the area of land owned by the foundation. Through these sources the foundation came into the possession of a plot of land 260 feet by 680 feet for the development of the hospital and the out-patient building. It is easily accessible to all kinds of traffic. The street car line is only a short block from the out-patient building. The building itself was designed to catch the prevailing southwest breeze.

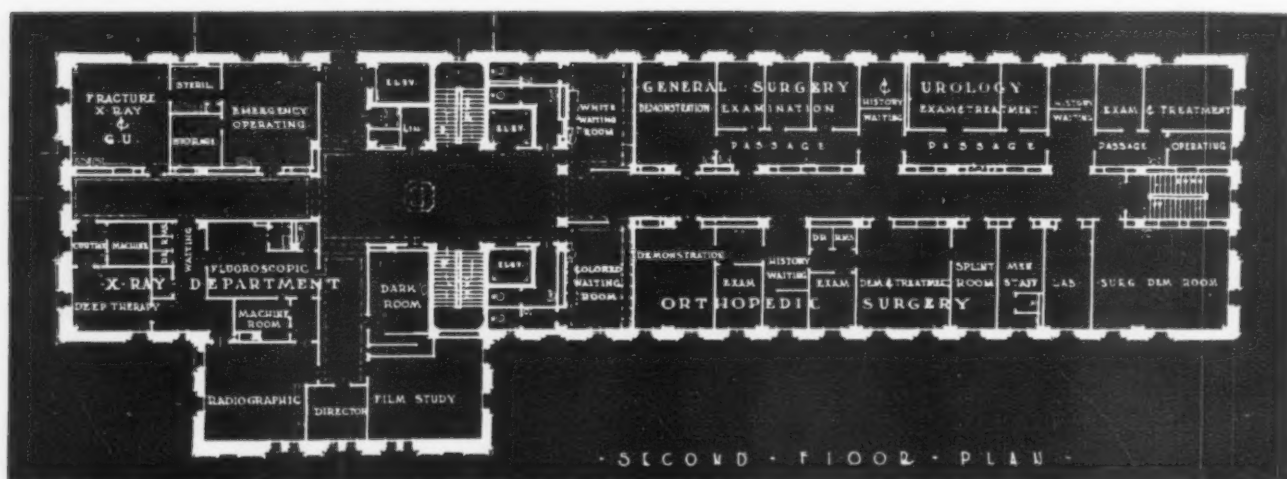
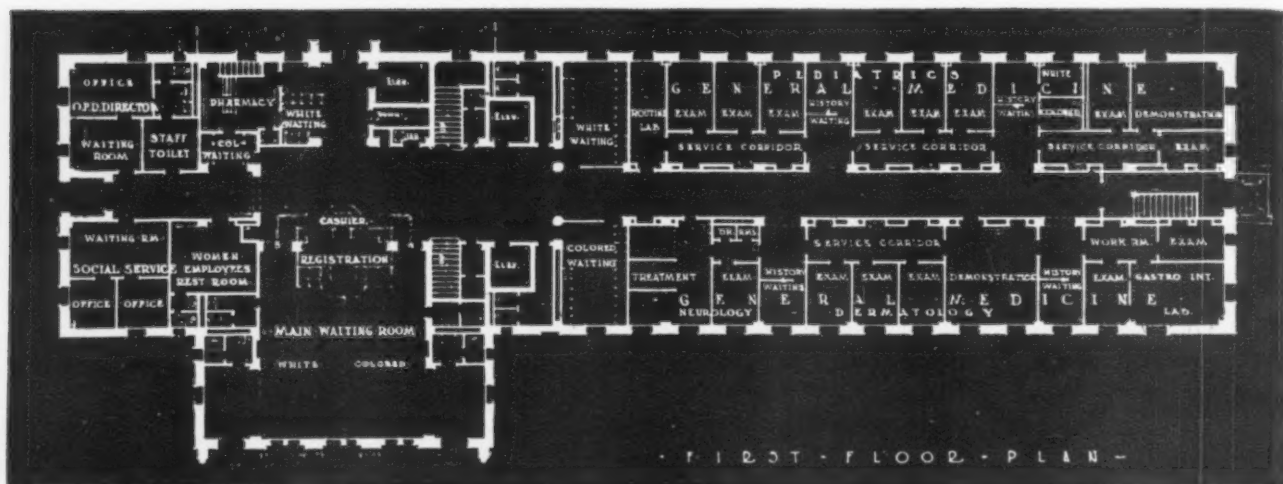
Since the building committee has in mind the erection of a new hospital in the near future, it felt that the building for the out-patient department should be a unit of the completed hospital plant. For this reason the out-patient building was designed so that it could readily fit in with the completed scheme which will call for a hospital building along modern architectural lines. In this scheme the out-patient building becomes an end pavilion with the five-story flat roofed portion forming a part of the main body of the

completed structure. This accounts for the structure's shape and general design. While it is only a part of the completed scheme, this building had to be designed to function as a separate building for several years.

The out-patient building in shape is a modified T, the main portion of which measures 50 by 200 feet, while the stem, which is to connect with the future building to the north of the center, is 50 feet wide and projects from the body of the building 25 feet. It is five stories high in the central portion where the amphitheaters are located and four stories high over the remainder of the building.

In design the building is a modernized adaptation of the Romanesque. The first story is of Lueder's limestone and the upper stories are of brick trimmed with art stone in harmonizing light buff shades. The pitched roof areas are covered with clay tile in blending shades of reds and tans.

In construction, the building is of the latest fire resistive type. The frame and floor construction are of reinforced concrete resting on concrete piles 35 feet long. Interior partitions are of hollow clay tile which was also used to back the



The first floor is devoted to examinations and the second to x-ray and surgery.

exterior walls and to provide forms for the concrete floor joist construction.

The present hospital and the out-patient building are connected by means of a two-story arcade which serves the double purpose of carrying the power, heating and water lines on the ceiling of the first story. This arcade spans the street in front of the hospital but it does not interrupt traffic. The enclosed second story is used as a passageway through which patients from the hospital are transported to the x-ray, electrocardiographic and basal metabolism departments. The second story of the arcade joins the main corridor of the first floor of the hospital and the corridor adjacent to the x-ray department on the second floor of the out-patient building. The floor level of the first floor of the hospital is seven feet below the floor level of the second floor of the out-patient building. This difference is taken care of by two gentle inclines in the floor of the arcade with an area of level flooring between the inclines and at either end of the arcade.

Due to the difficulty in waterproofing a basement in Galveston, the basement was kept at the

minimum size, only affording space for the medical students' locker and wash room and for pharmacy storage. The pharmacy storage contains two vaults, one for alcohol and liquors and the other for narcotics and valuable medicines. An electric lift carries supplies from the store-room to the dispensary on the first floor.

The first floor is devoted to administration offices and treatment and examining rooms for the medical and dermatological clinics in the mornings and for the pediatrics and neurological clinics in the afternoons.

In order that white and Negro patients may visit the clinics without mingling, a scheme of segregation was devised. Each race has a separate entrance to the large waiting room which is divided in half by a wooden partition seven feet high. The registration desk extends across the waiting room, and it in turn is divided in half by the partition seven feet high so that patients of either color have a waiting room and a registration desk of their own. After registration the patients pass around the registration desk and are directed by the control clerk to the floor on

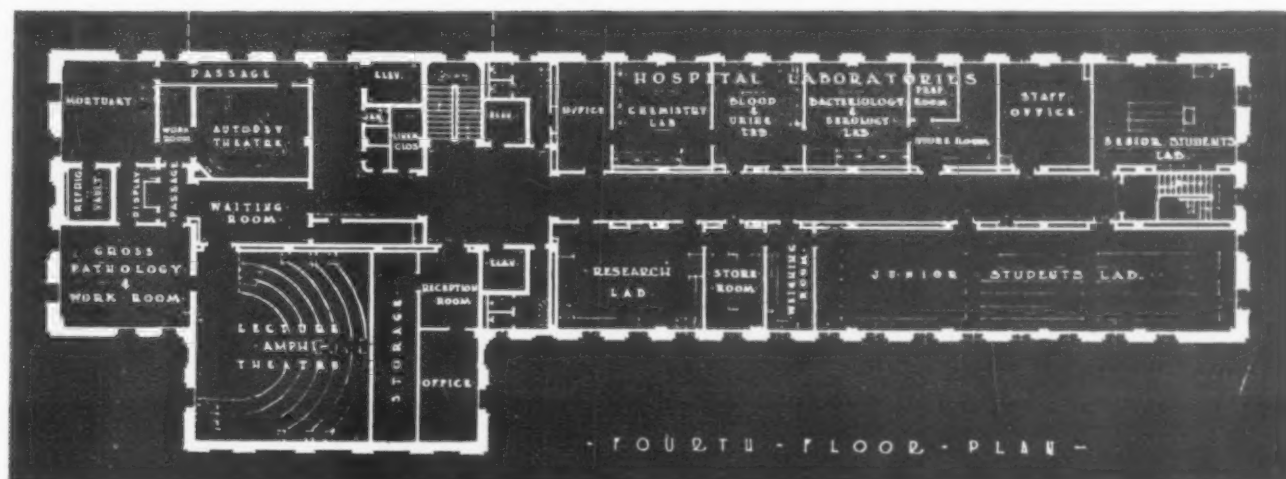
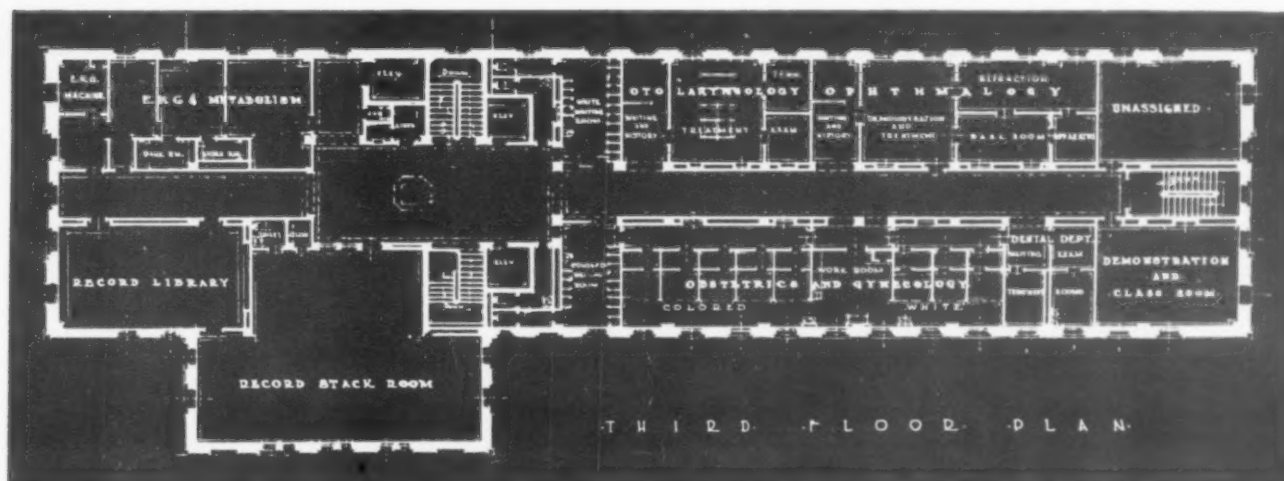
which their clinics are held. Each floor has a subwaiting room for white patients and for colored patients. The patients stay in these subwaiting rooms until they are called to the history room, where medical students take their histories. From here they are sent to the examining and treatment rooms. This method of handling patients not only segregates the white and colored patients but it also permits a constant flow of patients from the registration desk to the examining and treatment rooms. Each waiting room has a sanitary drinking fountain with circulating cooled water and a wash room and toilet for men and for women patients. Heavy oak benches in adequate numbers have been provided for seating purposes.

The floor of the foyer around the registration desk is covered with rubber tile in shades of brown and tan. The walls have a faience tile wainscot six feet high with a color scheme of various shades of tan and brown. The ceiling has acoustical treatment in the panels between the decorated beams.

The front counter of the registration desk is divided into small booths to assure the patient

privacy while he is talking to the clerk or social service worker. A seat in the booth is provided for the comfort of the patient. The rear counter faces the main corridor of the building and is used by the cashier who also acts as the control clerk for the first floor.

In addition to the registration desk and waiting rooms, space has been provided in the administration area on the first floor for the director's office, the social service department, the female employees' locker room, the pharmacy, the dispensary and the visiting staff's cloak room. The pharmacy dispensary is across the hall from the registration desk, and all collections will be handled by the one cashier in the registration department. The patients will present their prescriptions to the pharmacist and will receive a ticket stating the charges for filling them. They will step across the corridor and pay the cashier the amount indicated on the ticket and receive a cash register receipt for the amount. When the prescription has been filled, the pharmacist will collect this receipt. The cash register is arranged to keep three accounts: fees from registration,



Plans of the third and fourth floors show the location of the record room and laboratories.

from the pharmacy and from the emergency room. There are small waiting rooms for both white and colored patients adjacent to the pharmacy in which the patients wait while their prescriptions are filled. The dispensary window opens into these waiting rooms.

The examining and treatment rooms were planned on a basis of a unit of 20 feet by 24 feet which provides a service corridor 8 feet wide and three rooms 8 feet by 12 feet. Where larger rooms were needed than the 8 by 12 feet examining rooms, the space of two examining rooms was used; in some instances where a large demonstration room was needed, the entire unit was used for that purpose. The history rooms placed between the units serve the twofold purpose of a corridor for cross ventilation and lighting purposes and rooms where medical students take the histories of the patients before passing them on to the examining rooms. The partition across this space is seven feet high.

The second floor is devoted to x-ray and surgery. Provisions have been made in the x-ray department for radiology, fluoroscopy, superficial and deep therapy, fracture and genito-urinary work. The fracture and urological x-ray room is equipped with a shockproof fracture table and a urological table with one x-ray machine to operate both of them. The fluoroscopic room is equipped with a lightproof exhaust fan to withdraw air from the room and a lightproof louver on the wall opposite the fan, for a fresh air intake. Built into this room is a small workroom used to prepare the barium mixtures for the patients, and a toilet

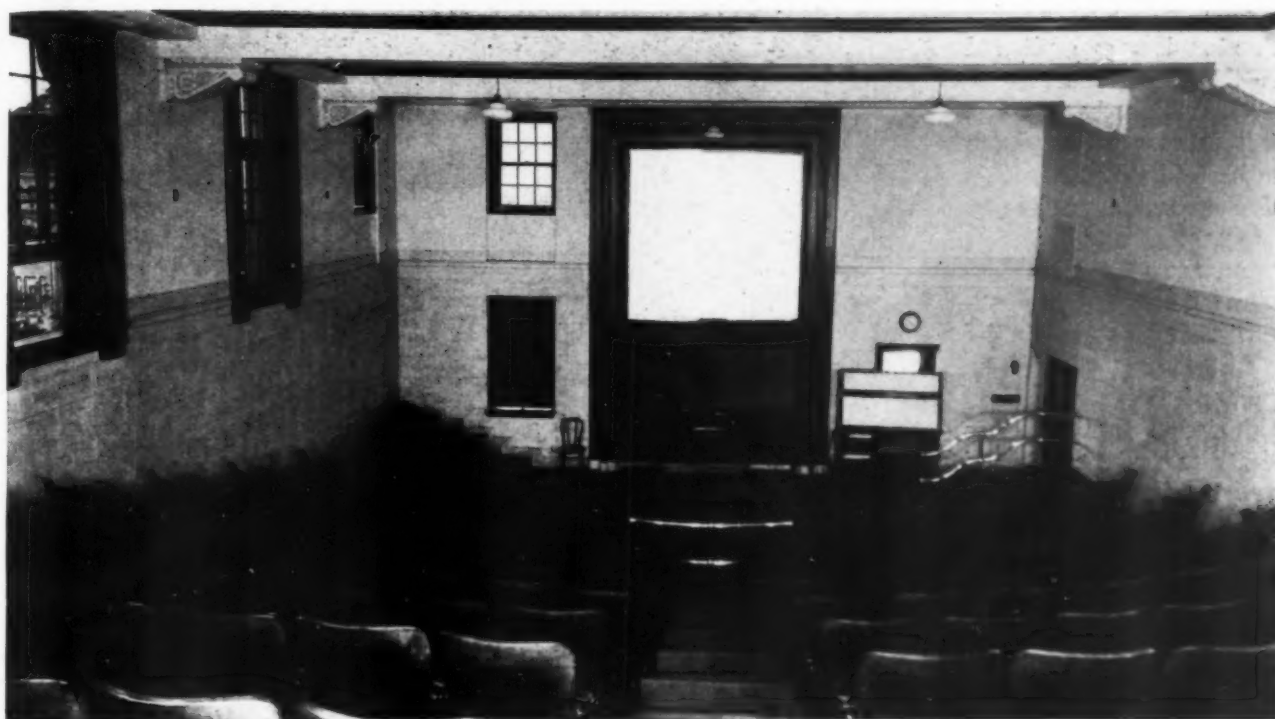
for the use of patients receiving barium enemas.

One machine room contains the machines for both the fluoroscopic and radiographic rooms and has been placed between them. This room is soundproofed with a layer of sound absorbing material beneath the plaster. The walls to these rooms and the fracture and genito-urinary x-ray room are plastered with barium sulphate. The deep therapy room is lined with lead. The walls of the deep therapy machine room are soundproofed with three air spaces separated by layers of sound absorbing material. The film study is equipped with three viewing cabinets 5 feet long. In addition to these cabinets, it contains one double deck illuminator 5 feet long mounted on a mobile base, which contains compartments in which films can be temporarily stored. This cabinet can be moved from the film study to any classroom and used for the demonstration of films. The dark room is equipped with safety lights over each workbench and developing tank. The developing tank has a built-in cooling system which is thermostatically controlled to maintain a temperature of 65 degrees Fahrenheit. This department is completely equipped with new apparatus. Space has been provided in the surgical clinic for genito-urinary, orthopedic and general surgery.

The emergency room is in this department and is reached from the ambulance entrance by elevator. It stands at the point where the arcade joins the building so that an emergency room patient can readily be taken to the hospital if necessary. No major surgery will be done in the emergency room. The equipment is complete and



This view of the record room shows the pneumatic tube conveyor on the left and the receiving station of the telautograph on the worktable.



The amphitheater is used for classes and clinic meetings.

includes an operating table, an operating room light and a sterilizer room with a utensil, instrument and water sterilizer and warming closet.

This third floor contains the record room, the basal metabolism and electrocardiographic laboratories, and the ophthalmological, otolaryngological, obstetrical and gynecological clinics. The record department consists of one large stack room and a staff library. One of the record clerks will have a desk in the library so that she will be available when the staff needs her. Space has been provided in the stack room for the cross index and workroom. The stack room is connected with the control desk on each floor by a pneumatic tube conveyor. Pneumatic tubes have also been installed to connect the new hospital, when it is built, with the record room. This record room serves both the hospital and the out-patient department, and it is planned in the future to combine the out-patient and in-patient records.

The record room is also connected with the registration desk by means of a telautograph. When a patient registers, his name, number and clinic are written on the sending set of the telautograph which records this information on the receiving set in the record room. From this data the record clerk will find the history and send it by the pneumatic tube conveyor to the control desk on the floor where his clinic is held. The control clerk will in turn deliver it to the nurse in charge of the clinic. The telautograph, while more expensive than a telephone, has the distinct

advantages of making a written record, preventing errors of misunderstanding names and numbers and sparing the record clerks the interruptions caused by the ringing of the telephone. The pneumatic tube conveyor should prove an economy by dispensing with pages to carry patients' histories from the record room to the clinics.

The obstetrical and gynecological examining cubicles are arranged with a small dressing room at the entrance of each cubicle. The entrance to the dressing room latches on the inside, thus ensuring privacy for the patient while she is disrobing and during her examination. After she has disrobed, the patient passes directly from the dressing room to the examining cubicle. All the examining cubicles open into a corridor which is used by the visiting staff and medical students.

The department of electrocardiology consists of an examining room for white patients, an examining room for Negro patients, a machine room, a dark room and a workroom which is shared with the basal metabolism laboratory. There are no clinics on the fourth floor. Its space is entirely devoted to laboratories and amphitheaters. The medical amphitheater has a seating capacity of 214. Each seat is wired for a stethophone. An epidiascope is provided for demonstration purposes. The window blinds are electrically controlled so that the room may quickly and easily be darkened. The ceiling is acoustically treated. The room is ventilated and lighted from three sides.

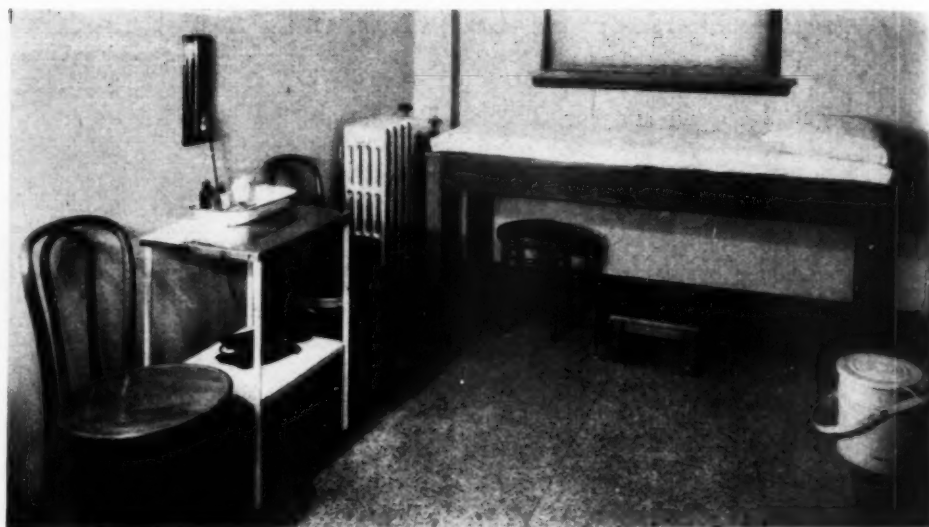
The autopsy amphitheater is steep pitched so that the students may all look directly down on the autopsy table. Each riser is 36 inches, while the tread is only 12 inches. Extending out from the riser 20 inches above the tread is an 8-inch ledge on which the medical students sit. The part of the riser above this ledge is inclined so that the student is forced to lean forward, resting his weight on the arm rail in front of him. This amphitheater seats sixty persons. The autopsy table is under a canopy.

Adjacent to the autopsy amphitheater is the mortuary which consists of an embalming and preparation room, cold storage for six bodies and a tissue workroom. The shelves in the cold storage are removable and fit the top of the autopsy table. The body is carried on the shelf as a litter and placed on the table. When the autopsy is completed, the body, still on the litter, is carried back to the cold storage.

A show case similar to the kind used in meat markets stands in the corridor leading to the autopsy room. This case maintains a freezing temperature and will keep tissues in good condition for several days. After an autopsy, interesting specimens properly labeled are placed in this case for study by medical students. Two x-ray illuminators are placed above this display case so that the films showing the condition before death can be studied along with the specimens. There is also a bulletin board on the wall at the side of the case for an abstract of the patient's record.

The hospital's clinical pathological laboratories are on this floor. Complete equipment and space are provided for the bacteriology and serology laboratory, the chemistry laboratory and a laboratory for the examination of the routine specimens from patients. The director of this laboratory holds a full-time position and, in addition to directing this work, he is in charge of the John Sealy Memorial Laboratory which is a research laboratory and was founded by the members of the board of the Sealy and Smith Foundation as the beginning of what they hope will develop into a research institute in the future. This laboratory is being equipped for research in biochemistry.

The remainder of the fourth floor consists of a fifty-desk clinical pathological laboratory for the



A typical examining and treatment room is shown here.

junior class of medical students and a smaller laboratory for the use of senior students in the examination of specimens from their ward patients.

The fifth floor only extends above the two amphitheatres and provides the top entrances to them and entrances to the two attics under the roof of the remainder of the building. One of the attics is used for a machine room for the refrigeration and venting systems. A part of the other attic is used for the animal house and the remainder for x-ray film storage. This attic is well ventilated and lighted by dormer windows and insulated against the heat from the roof.

Terrazzo flooring is used throughout the building with the exceptions of the entrance foyer on the first floor where rubber tile is used and of the x-ray department and corridors where battleship linoleum is used. The linoleum in the corridors is inlaid with a twelve-inch terrazzo border. The ceilings of the foyer, all corridors, the amphitheatres and the x-ray machine rooms are covered with sound absorbing material. The water lines are brass with bronze fittings. The drain lines are of genuine wrought iron and acidproof piping. The wood trim is quartered red gum and birch finished in walnut. The doors are birch finished in walnut. The general decorative treatment of the plastered surfaces is a light buff with an egg shell enamel finish. The laboratory equipment was specially designed to meet the needs of the institution. All toilets have tile floors and tile or marble wainscoting. Plumbing fixtures are wall mounted. Terrazzo and slate base and plinth blocks are used throughout. The window sills are marble. All other materials in the building were chosen with the aim of making a substantial building with a low maintenance cost.

Brooklyn Broadens Its Service in the Eye and Ear Specialties

By L. H. LEWIS

Crow, Lewis & Wick, Architects, New York City

THE borough of Brooklyn is now the largest in population of the five boroughs constituting New York City. Long Island, on which it stands, contains, according to the 1930 census, one-third of the entire population of New York State.

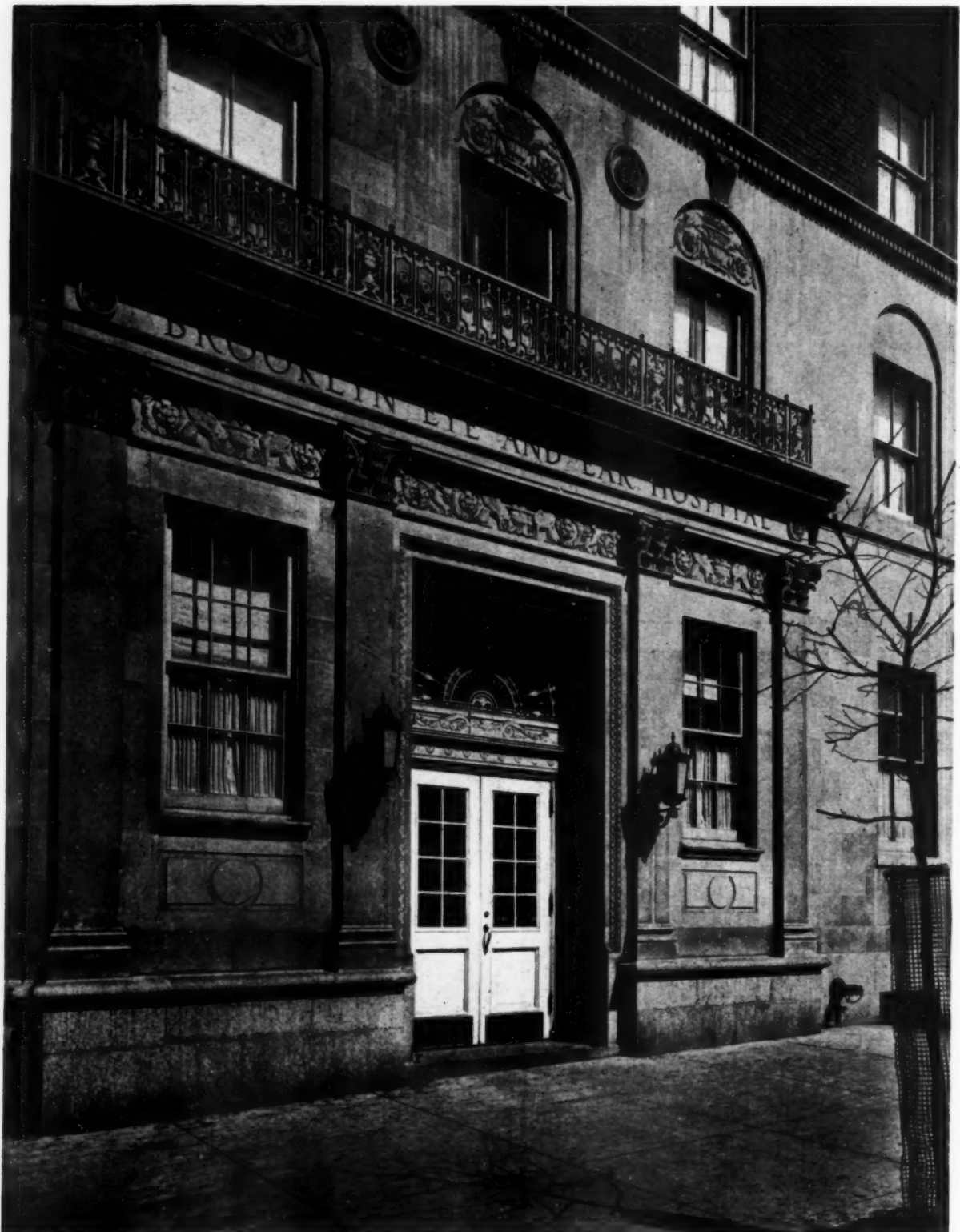
The new building of the Brooklyn Eye and Ear Hospital was completed during the present year. The hospital began its career in 1868 with a clinic

consisting of three or four doctors who had a tea-kettle for their sterilization equipment and little else in the way of necessities to help them in their needs. "When the echoes of the Civil War had not yet died away; when electric light and telephones were little more than dreams our hospital was founded," began the pamphlet distributed at the opening of the new building.

The small remodeled residence in which it



"Hospital atmosphere" is entirely lacking in this private room of the Brooklyn Eye and Ear Hospital.



The Brooklyn Eye and Ear Hospital

This view of the main clinic entrance shows the detail of the two lower stories, constructed of Bedford limestone topped with a terra cotta cornice and decorated with carved stone panels and ornamental iron.

started was demolished for the approach of the original Brooklyn Bridge. The hospital moved on to firmer existence under the wise guidance of Doctor Agnew who, at one and the same time, launched the Manhattan Eye and Ear Hospital, in the location it still occupies in Manhattan, and the Brooklyn Eye and Ear Hospital on Livingston Street in Brooklyn. These two were pioneer institutions in their field. From this start the work grew until, for many years past, the hospital has been one of the few in the city meeting its budget out of its earnings, and at the same time, in overcrowded quarters, carrying on the sixth largest work of this character in the world.

Unique in Its Completeness

After several years of study and research the present building has risen, one of the most complete and best equipped institutions for this special service in the world. With a large investment in medical equipment and special instruments of precision, a scientific research department, well equipped pathological and sociological departments and a dental clinic, and with a resident general physician to care for diseases that are interwoven with the specialties, it is unique in its completeness.

According to the pamphlet already referred to: "Besides the highly developed facilities for the special study of the eye, ear, nose and throat, the new hospital is particularly equipped to investigate and treat systemic diseases in any way causing or resulting from affections of the special sense organs. To this end, certain consultation departments have been built up during the last ten years that have rendered such material aid as to justify their existence and to warrant their expansion. The x-ray department will have particularly fine equipment not only for the localization of particles of metal and foreign bodies within the eye and for the demonstration of disease causing blindness or deafness, but also for the elucidation of such disturbances as brain tumor, fracture of the skull and brain abscess.

"The relation of dental disturbances to diseases of the eye and ear has become so well known that it has been necessary to have especially trained dentists to supervise this branch.

"A research department has been provided which is to investigate certain of the conditions causing deafness and blindness, in the hope that a better knowledge of obscure conditions can be gained. This department is wonderfully supplied with elaborate instruments of precision for such studies. Scientists in every field will be available for special problems."

Care has been taken, both in the planning and

construction, in the quality of the materials used and in the architectural detail to make the building a practical working unit and at the same time attractive and inviting. The appointments and furnishings have been planned to counteract as far as possible the "hospital atmosphere," at the same time maintaining the necessary high standard of hospital requirements. The building is flooded with sunlight and the walls are of warm, inviting colorings throughout. The furniture, with the exception of the beds, is of wood. To obtain a variety of treatment in the various rooms, this furniture has been finished in three colors.

Curtains are at all windows, even in the wards. The draperies of private and semiprivate rooms are done in pastel shades restful to the eye. All these materials, even to chair coverings, are of washable mohair. Old flower prints have been hung in all private and semiprivate rooms to relieve the plain walls. The furnishings and decorations, selected under the direction of the wife of a prominent member of the staff, are in exceptionally good taste.

Although the hospital is situated on the border of a residence district in a quiet atmosphere, it is only a few blocks from the railroad station which feeds Long Island, and to which come, also, the three subway systems of the city. Surface cars and elevated railroads are close by.

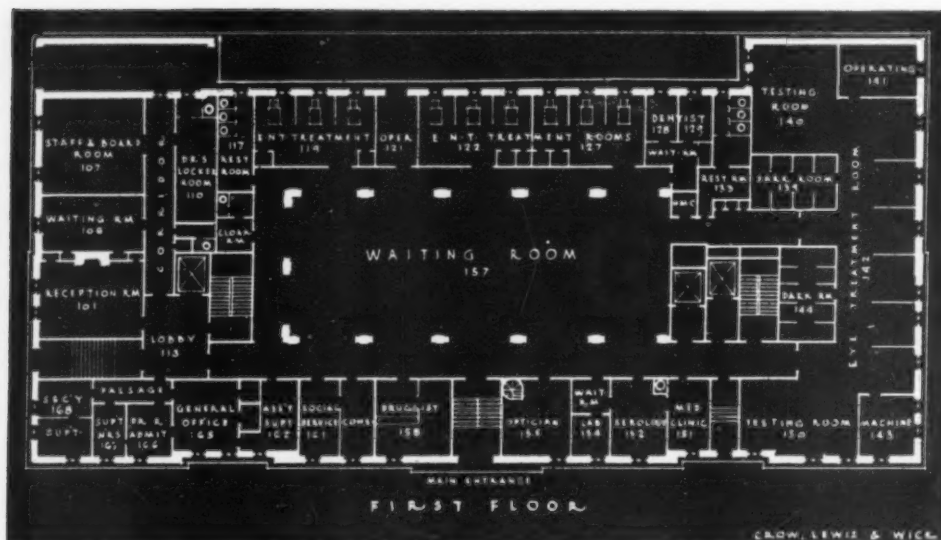
Sunshine and Fresh Air Are Abundant

The new building faces south, with an exposure of 200 feet on Greene Avenue, 95 feet north on Carlton Avenue to the east and 95 feet on Cumberland Street to the west. The location, which is on one of the highest sections of Brooklyn, is assured a wealth of sunshine and fresh air.

The new building is a seven-story structure in addition to the basement, the sub-basement and the roof pavilion. The exterior is of Bedford limestone in the two lower stories with a granite base course below. The upper stories are of variegated red brick with limestone belt courses and a terra cotta cornice.

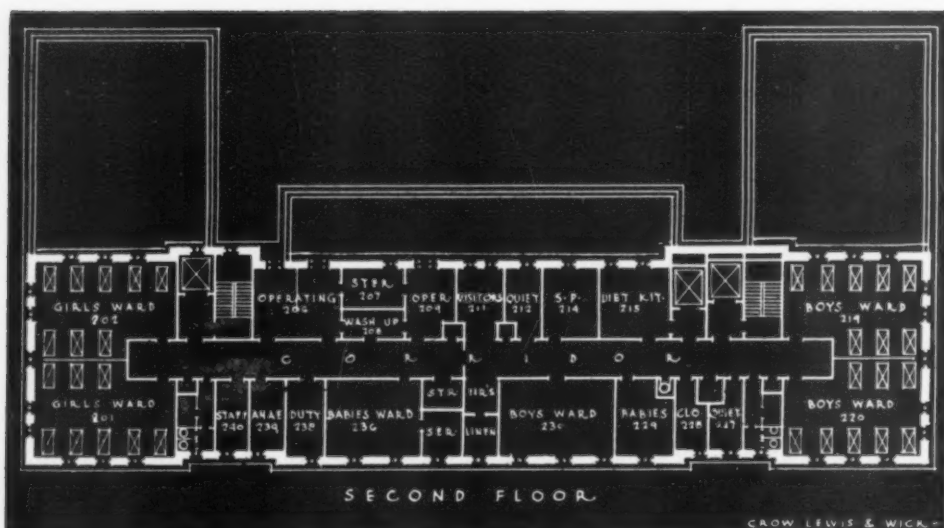
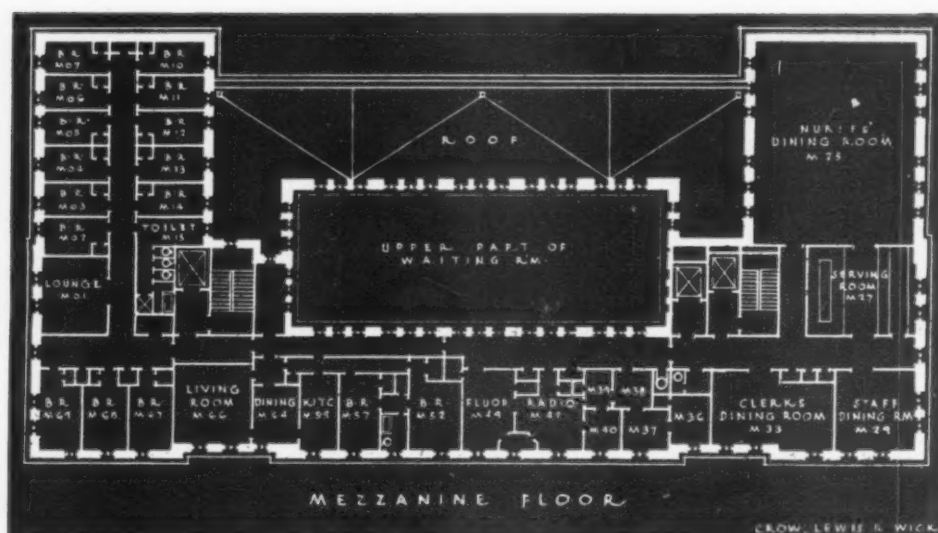
The main clinic entrance is from Greene Avenue. The clinic waiting room is two stories high. It is really a great hall having lateral dimensions of approximately 42 by 92 feet. Together with the adjoining clinic, it has a seating capacity of approximately 500. It is wainscoted in gray Knoxville marble to a height of 3½ feet and is furnished with gray oak benches designed to harmonize with the style and dignity of the room. The floor of the waiting room and clinics is terrazzo divided into squares by brass strips. The operating rooms have tile floors and wainscot.

In the center of the waiting room is a booth con-



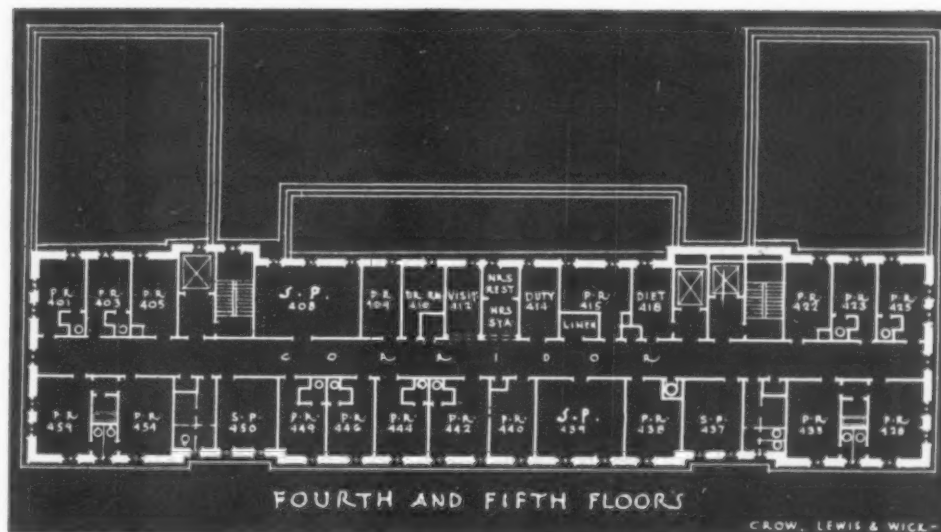
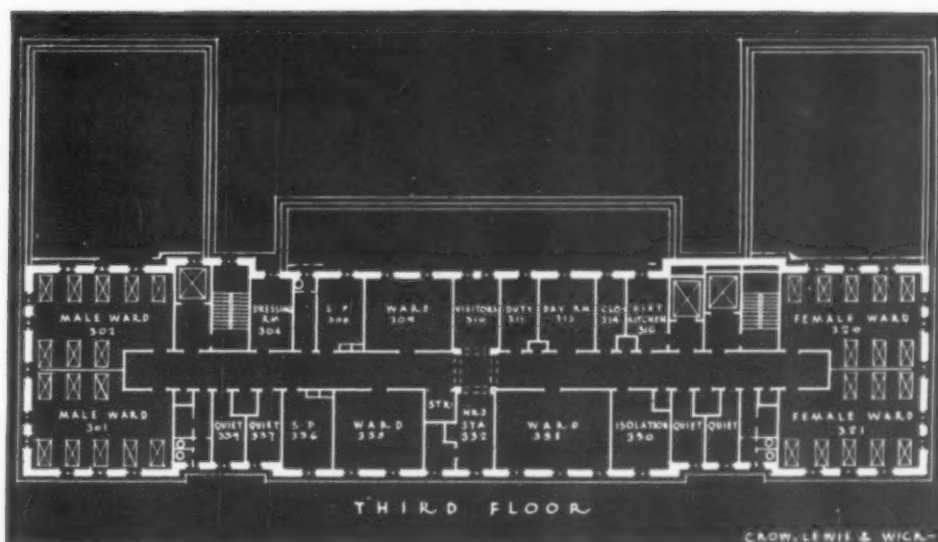
The waiting room occupies a large area on the first floor. It is two stories high and resembles a huge hall, which with the adjoining clinic, has a seating capacity of about 500.

On the mezzanine are the x-ray department and the superintendent's living quarters. The eastern portion is given over to dining rooms while the western part is occupied by the resident staff.



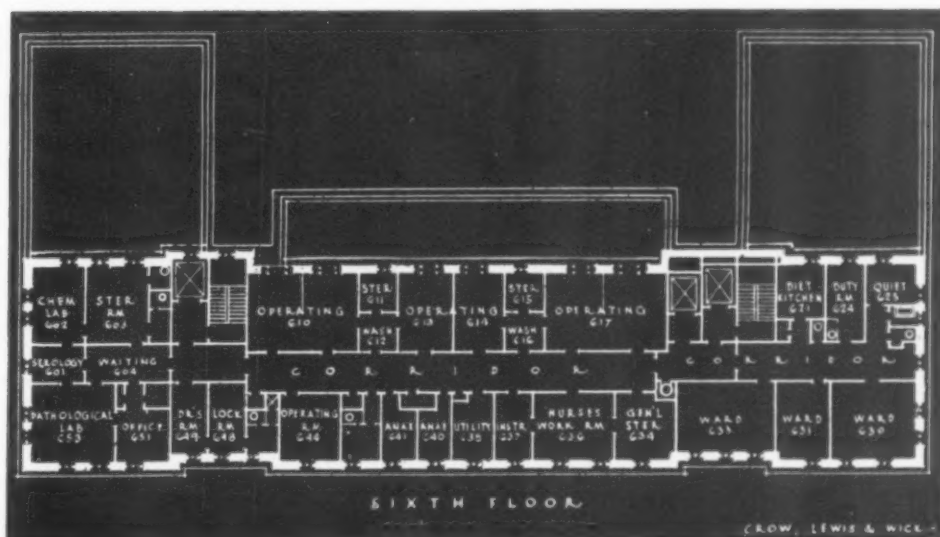
The adenoid and tonsil department occupies the second floor and consists of separate wards for boys and girls, private rooms and a ward for babies, making a total of fifty-five beds.

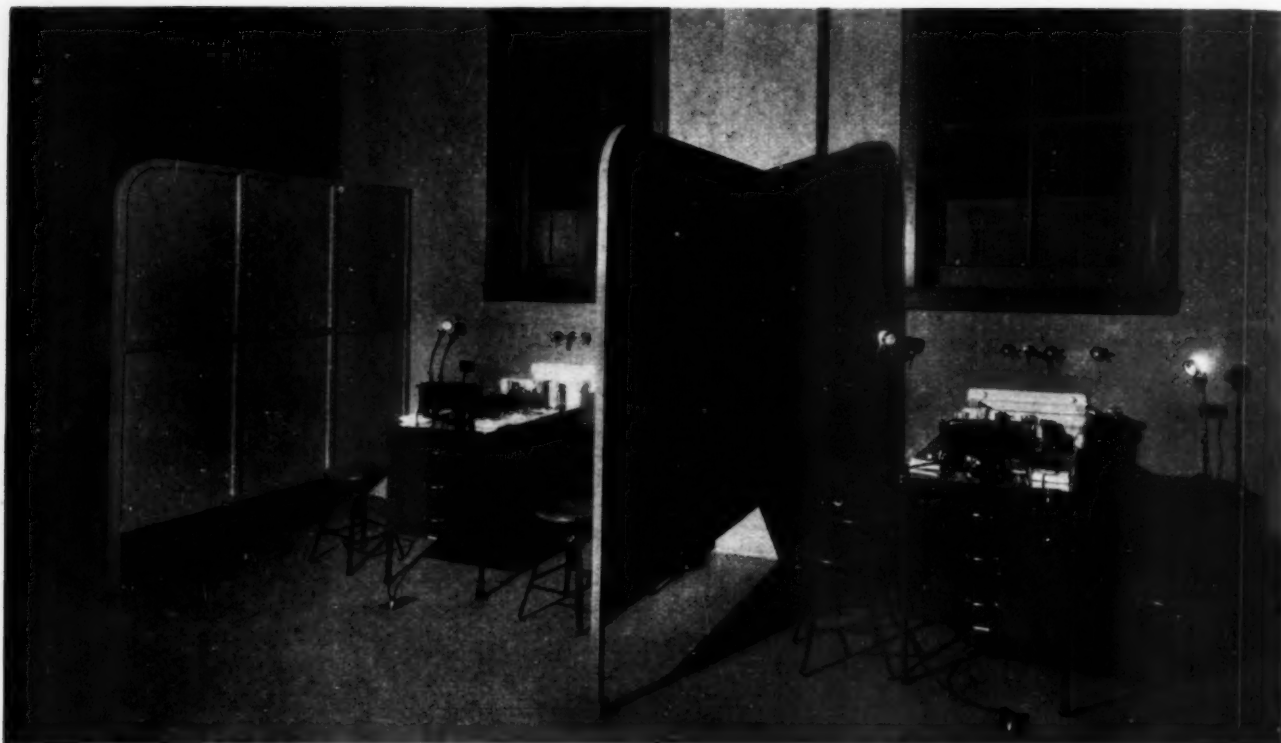
The third story is occupied by wards similar to those on the second, those in the western part being for men and those on the east for women, making a total of fifty-two beds.



Private and semi-private patients are cared for on the fourth and fifth floors. Each of these stories is provided with a central nurses' station and a centrally located visitors' room.

The central portion of the sixth floor constitutes the main operating department and consists of two operating rooms containing two operating tables each, and three single operating rooms.





Treatment booths are separated by metal partitions and are quite open in front, affording full observation to the surgeon in charge. Floors and walls in the operating department are tiled, the walls being wainscoted with green tile to a height of seven feet. One of the double operating rooms is shown below.



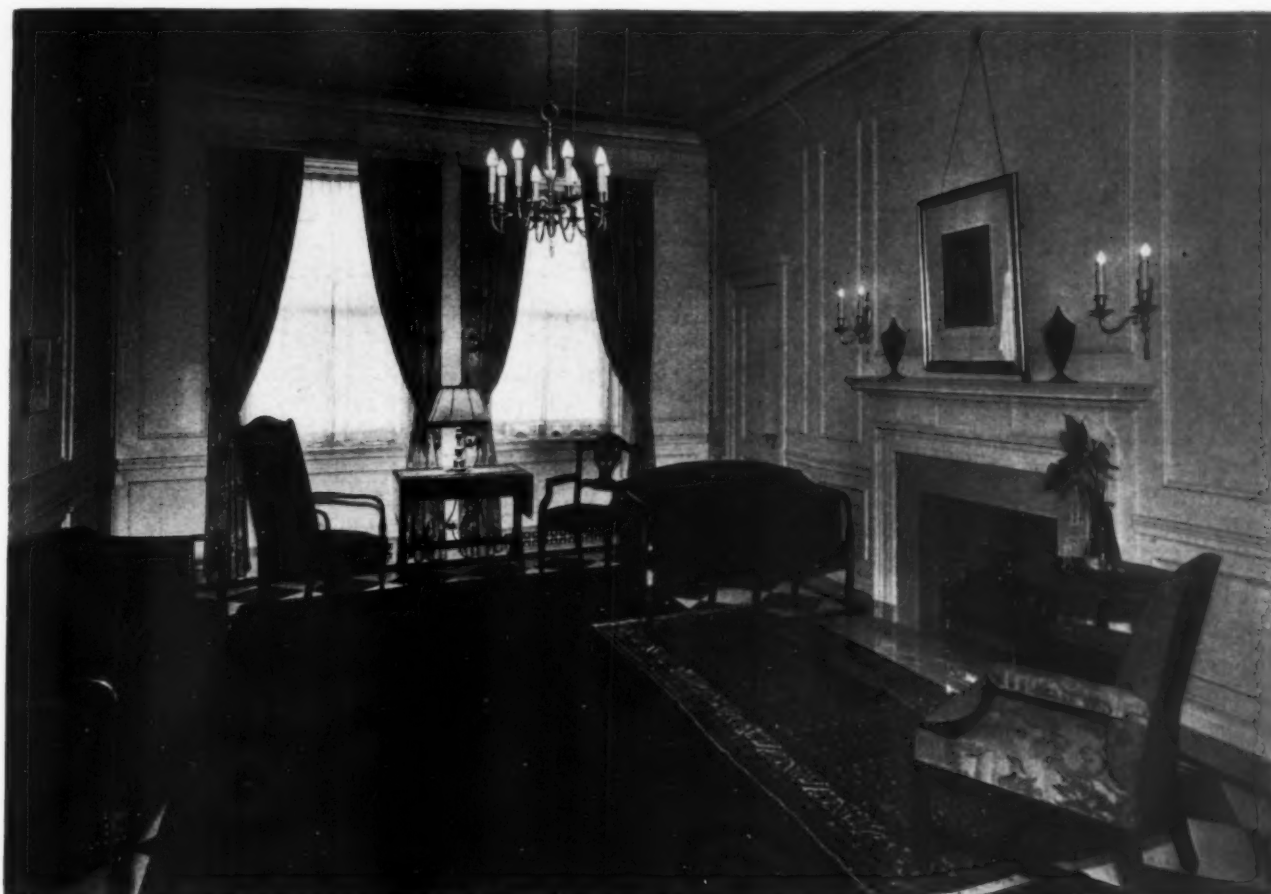
sisting of counters on all sides. Steel file cabinets below contain a card index system for all clinical cases. Rest and toilet rooms, opening from the waiting room, are provided for both men and women patients.

On the north side of this waiting room are three ear, nose and throat treatment rooms, each of which contains three booths and a dark room. Also, on the north side, are an operating room for ear, nose and throat cases, and the dental department, which consists of two dental offices and a

At the north end of this treatment room are an operating room and an eye testing room; on the south side are another testing room of equal size and a machine room.

There are also two dark rooms, one containing eight and the other nine booths.

Patients are received for treatment throughout the day. The clinic hours are from one to three p.m.; the average number of patients cared for daily since the opening of the new building is 387; the largest number in any certain day was 625.



The private patients' reception room has paneled walls and colorful cretonne draperies.

waiting room. These rooms are one story high, thus allowing windows above for the direct lighting of the large waiting room.

On the south side to the west of the main entrance are the drug store and social service department and to the west of these the administration offices. To the east of the entrance are the optician's shop, the serology department and the medical clinic.

The eastern end of this story is given over entirely to the eye clinic. This consists of a treatment room with six booths separated by metal partitions, seven feet high. These booths are quite open in the front to afford full observation by the surgeon in charge.

The private patients' entrance is on Cumberland Street in the west side of the building. Here are also the offices of the superintendent, his secretary, the superintendent of nurses and the private patients' admitting office as well as the staff and board rooms, a waiting room and reception room for private patients, attractively furnished, and a doctors' locker and toilet room.

In the mezzanine story, facing the south, are the x-ray department and the superintendent's living quarters. The east portion of this mezzanine story is given over entirely to the dining rooms for the staff, nurses and clerks, together with a serving room equipped for either direct or cafeteria service and having its own dishwashing department.

The west portion of this story is occupied by the resident staff and consists of fourteen single bedrooms, together with a lounge and toilet rooms.

The adenoid and tonsil department occupies the second story and consists of two adjoining wards at the west end, of nine beds each, for boys and two corresponding wards at the east end for girls. In the center portion of this story are similar wards, a few private rooms, and a ward for babies, all together making a total of fifty-five beds. There are also three operating rooms, a complete sterilizing room, an anesthetizing room and a doctors' wash-up and locker room, so that the children, who are generally overnight cases, are completely cared for in this story.

In both the second and third stories, one nurses' station is centrally located with an additional station at each end of the corridor overlooking the wards.

The third story is occupied by wards similar to those in the second, the wards in the western portion being occupied by men and in the eastern portion by women, with a total of fifty-two beds.

The fourth and fifth stories are for private and semiprivate patients. Most of the rooms have individual toilet rooms. In each story there are two private suites of two rooms having bath and toilets. Each of these two stories is also provided with a nurses' station and visitors' room.

The central portion of the sixth story constitutes the principal operating department of the hospital and consists of two operating rooms containing two operating tables each, three single operating rooms, two anesthetizing rooms, local sterilizing rooms and a general sterilizing room and nurses' workroom; there are also an instrument room, a general utility room and an attractively furnished lounge for the doctors.

Roof Pavilion Is Well Planned

Floors and walls in the operating department are tiled throughout, the walls in the operating rooms being wainscoted with a mat glazed grayish green tile wainscot to a height of seven feet. At the western end of this story is the laboratory department consisting of separate chemical, serological and pathological laboratories, a sterilizing room and an office. This department was fully equipped through the generosity of a member of the staff. The east end of the story contains three wards with a total of ten beds and a quiet room, a diet kitchen and a nurses' workroom. These are for the accommodation of medical cases.

The roof pavilion consists of a solarium for private patients and one for ward patients; it has also a diet kitchen and working facilities for the nurses. These rooms are given the maximum

amount of window surface on the south and north sides, and the windows are glazed with an ultraviolet transmitting glass. The remainder of the roof is used as an open air roof deck and is equipped with teakwood chairs and settees, the wood being well seasoned through many years of service on British battleships. When the ships were dismantled, the teakwood was purchased by an enterprising English dealer and converted into furniture adapted for open air exposure.

All Trays Go From Main Kitchen

In the basement is the main kitchen department, the kitchen itself being approximately 45 by 49 feet. There are separate rooms for special diets, for the bakery, for the dishwashing equipment and for the dietitian's office. There are also separate departments with low surrounding partitions for the butcher, for vegetable preparation and for salad and milk preparations.

The kitchen is under the supervision of a trained dietitian. With the exception of the babies' ward in the second story, the food for which is prepared in a special diet kitchen adjoining the ward, all food trays are prepared in the main kitchen and delivered to the several floors by food trucks. Food is delivered in bulk from the main kitchen to the serving room for nurses and interns in the mezzanine story. All dining room dishes are washed locally. All other dishes are washed in the main dishwashing room.

A completely equipped laundry occupies the east end of the basement. The morgue adjoins the entrance from the private driveway.

All goods are received from the private driveway on the north side of the building. Adjoining this entrance are a large room for kitchen stores, a refrigeration department and locker rooms for the employees. On the south side of this basement are storage and workrooms for the drug and optician departments, a repair shop and workers' dining rooms with cafeteria service.

The heating plant, consisting of three oil burning units, is in a sub-basement at the east end of the building under the laundry.

The building is equipped throughout with nurses' call and doctors' silent paging systems. It has a centrally controlled clock system. There are three elevators, one at the west end of the building convenient to the private patients' entrance, the other two at the east end, convenient to the clinics. One of these is used, as required, for food carts and for general service.

Provision is made at the east and west end of the building for future extensions to the north above the mezzanine story and extending to the full height of the present building.

Factors to Be Considered in Planning for Tuberculosis Sufferers

By T. B. KIDNER

Consultant, New York, N. Y., and

SUTTON & SUTTON

Architects, Newark, N. J.

THE great increase of the population in recent years in the districts surrounding the Metropolitan Area of the City of New York, on both sides of the Hudson River, has made it necessary to increase considerably the facilities for the care and treatment of the tuberculous in those districts.

The population of Essex County, New Jersey, increased so much that the County authorities found it necessary to undertake a program for the enlargement of the County Tuberculosis Sanatorium, which is situated in very pleasant surroundings at Verona, in an outlying part of the County.

The principal need was for more accommodation for patients, and two new buildings, planned for that purpose, have just been completed. One

of these is a new Infirmary Building, and the other, a "Community Building." It was, of course, necessary to provide also for an extension of the service facilities; including a fine new Dormitory Building for female employees, which was completed some months ago.

An interesting point about the two new buildings for patients is that each of them typifies two great changes that have taken place in sanatorium planning in recent years. The first of these was brought about by the great increase in the proportion of patients in the Infirmary stage of treatment. Hence the decision of the Essex County authorities to provide a complete new Infirmary Building.

The second change was brought about by the increasing attention paid in recent years to what



Fig. 1. Perspective view of the Infirmary Building. Most of the patients' rooms are on the front and ends of the building so that most of them are reached by the sun.

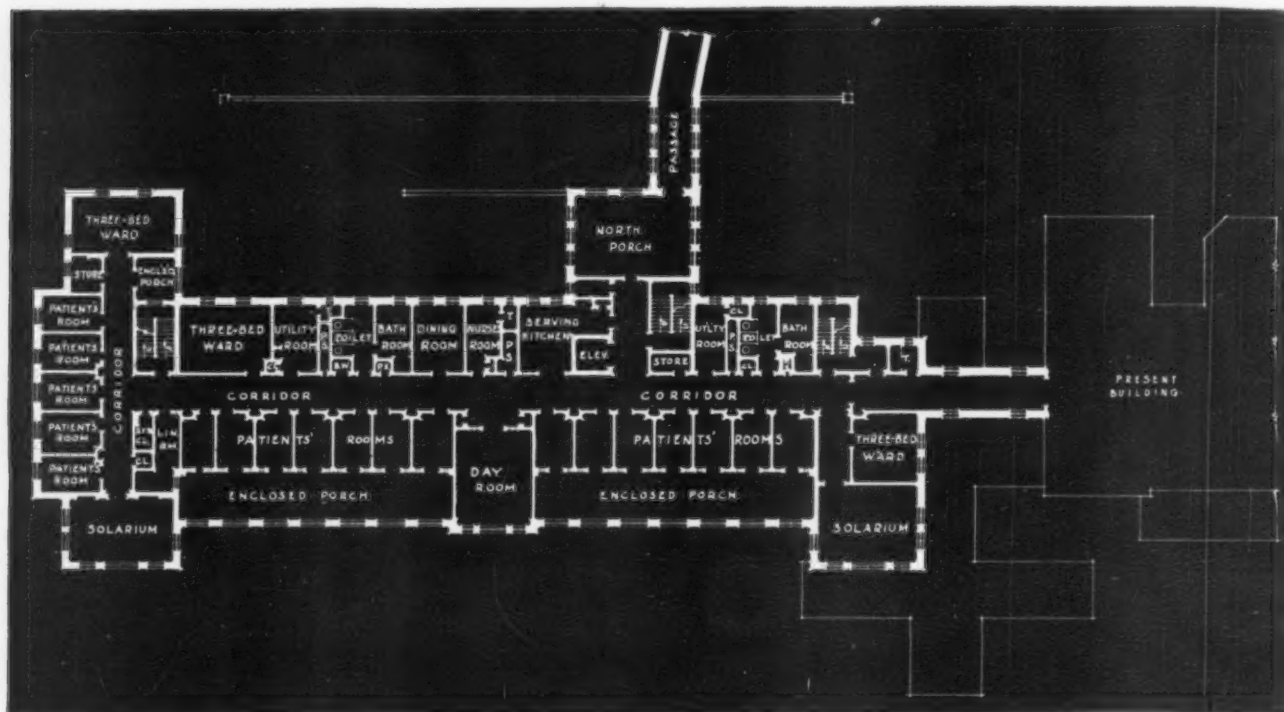


Fig. 2. This typical floor plan of the Infirmary Building shows the porch or solarium adjoining each room or ward.

has been sometimes termed "moral treatment." As one leading sanatorium specialist put it some time ago, "We have found it necessary not only to treat the patient's lungs, or other tubercular organs, but to treat the *whole patient*." This involves provision for recreation and amusement, religious exercises and occupational therapy. Hence the decision to provide at this sanatorium an adequate Community Building.

When the original buildings for the Essex

County Sanatorium at Verona were planned, the standard requirements were that 20 per cent of the beds should be arranged for "Infirmary" patients (cases needing bed care) and the rest for semi-ambulant and ambulant cases.

Today, these proportions are reversed, and in up-to-date, modern sanatoriums at least 60 per cent of the beds are for Infirmary cases and 20 to 25 per cent are of modified Infirmary type; the remainder being planned for ambulant cases. In

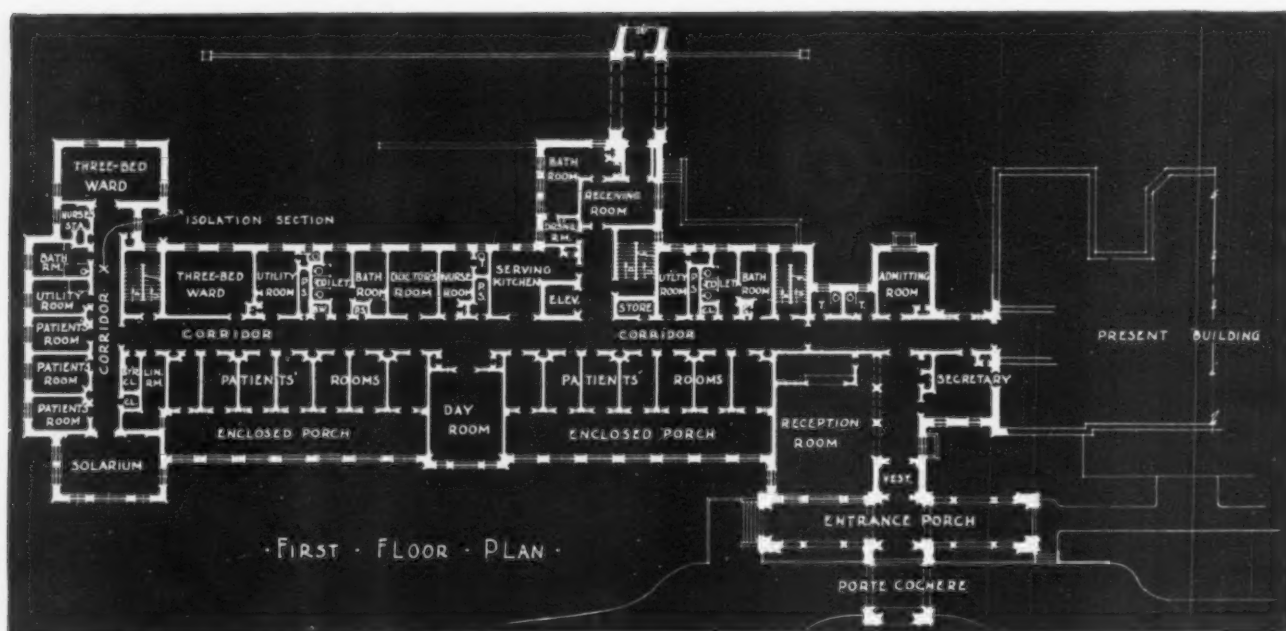


Fig. 3. On the First Floor of the Infirmary Building are the Reception and Observation sections and an admission room near the ambulance entrance at the rear.

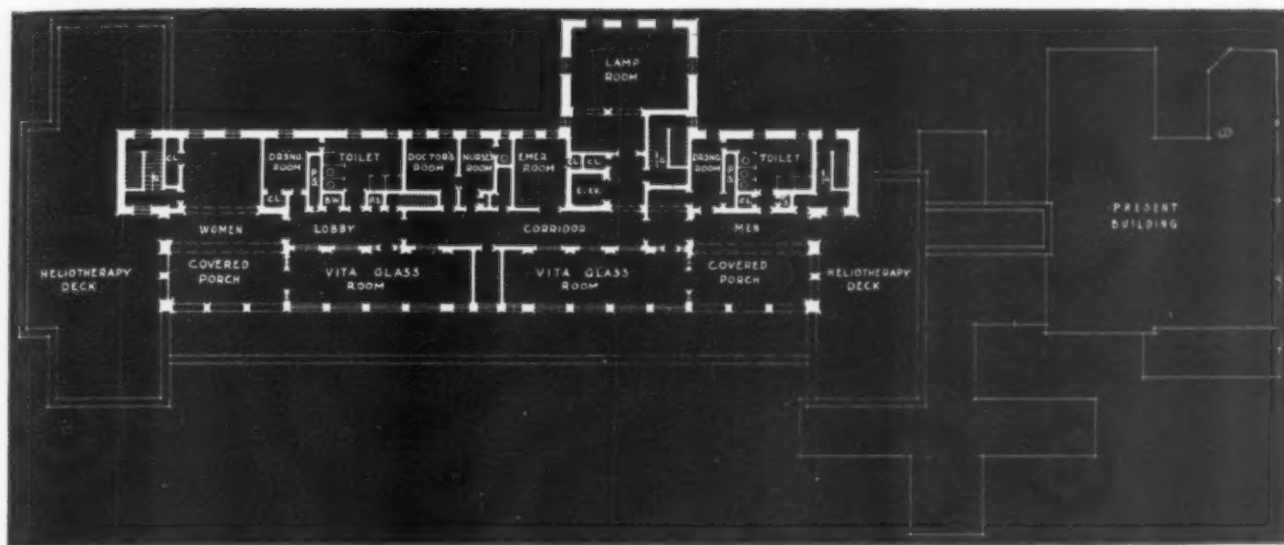
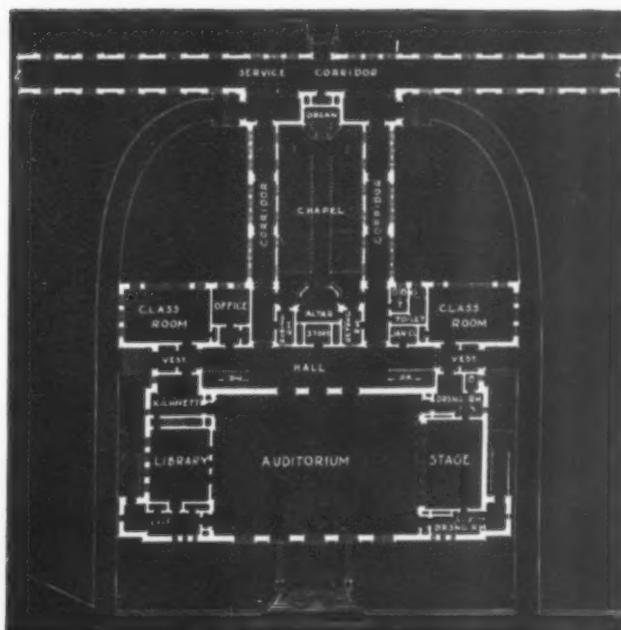
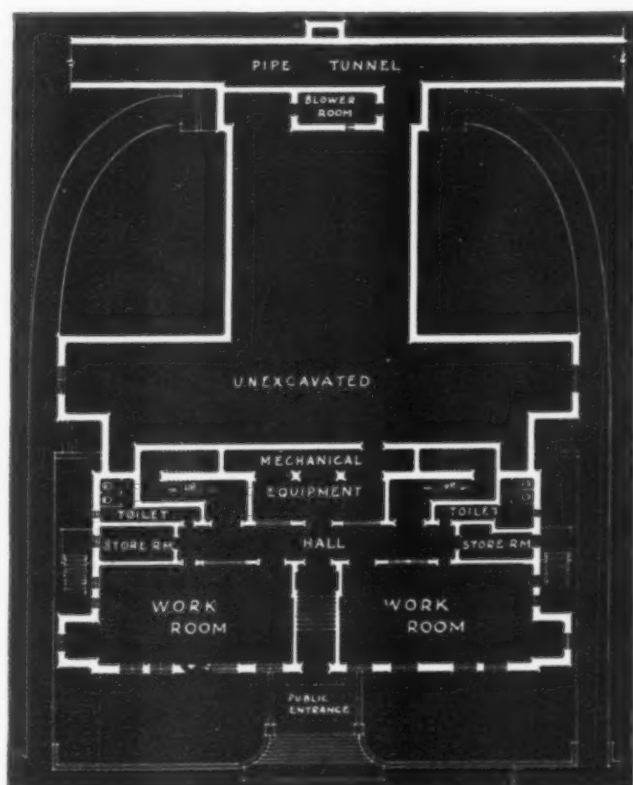


Fig. 4, above, is a plan of the fifth story of the Infirmary, where various types of phototherapy facilities are provided. Fig. 6, below, and Fig. 7, at the right, show the arrangement of the first floor and second floor of the Community Building, which is equipped for recreation and religious exercises.



fact, several leading sanatorium authorities in the United States and Canada are in favor of making all the accommodation for patients of Infirmary type. In this connection, however, it should be said that the type of accommodation provided in a first-class sanatorium today for ambulant cases is usually superior to that provided for infirmary cases fifteen or twenty years ago.

Infirmary Building

This building is five stories in height, with a basement story (Fig. 1), and is orientated to face south. Most of the patients' rooms are on the front and ends of the building, only a few rooms being on the rear; so that most of the rooms occupied by patients are reached daily by the sun. The space on the north side is devoted principally

to service purposes. The basement is planned for hospital storage purposes.

The building has a capacity of 117 beds. In line with the tendency in modern hospital planning, 78 of the beds are in single rooms, 6 in semi-private (2-bed) rooms, and 33 in 3-bed wards.

A typical floor plan is shown in Fig. 2. It will be noted that most of the rooms and wards have a sleeping porch, or a solarium, adjoining them. Where this is not the case, a solarium is within easy reach. A porch for use in warm weather has

rooms for diagnosis and special treatments; including a modern X-ray Department, a well-equipped operating department, dental clinic, laboratories, etc., all of which are thus readily accessible from the new Infirmary Building.

The uppermost story (Fig. 4) has been specially planned for phototherapy of the several types that have been found to be effective in the treatment of tuberculosis.

The facilities provided include, for each sex (a) an open deck for direct sun treatment; (b) a covered portion for air baths; (c) a room glazed with

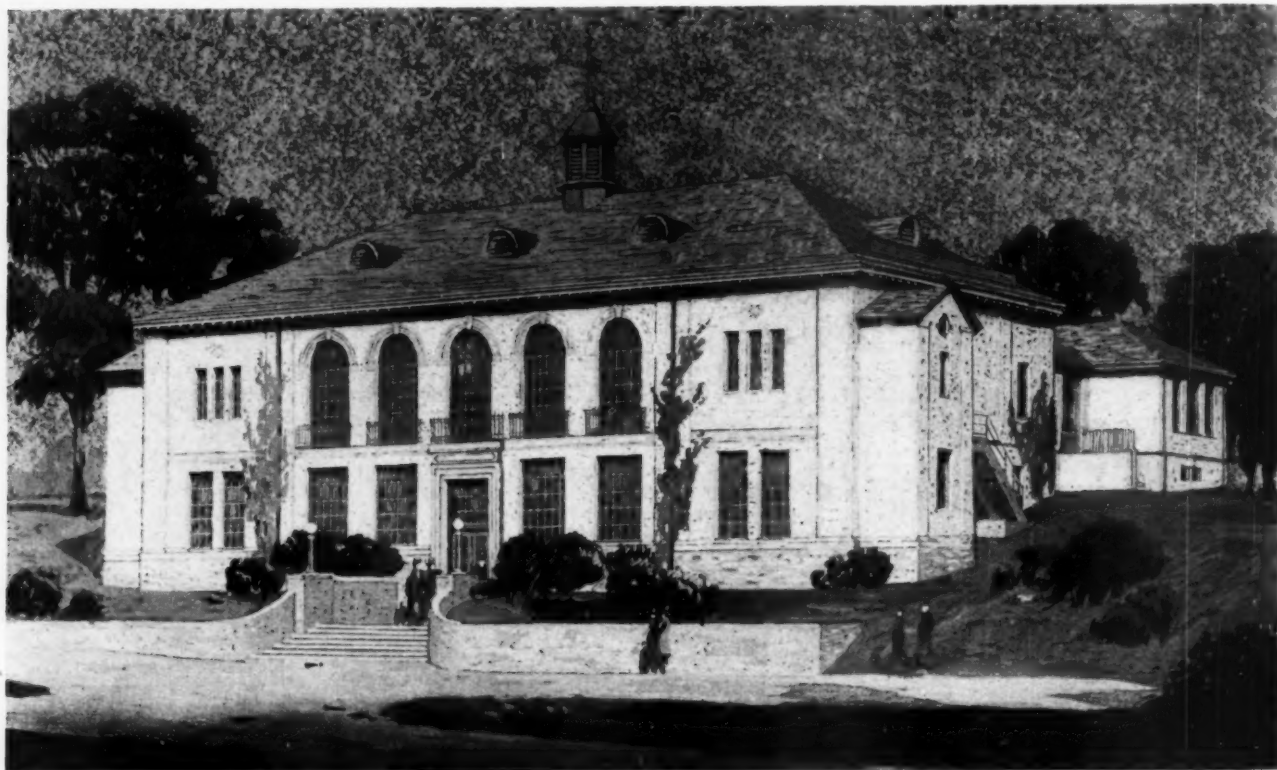


Fig. 5. Perspective view of the Community Building.

also been provided on the north side of most of the floors.

A serving kitchen is provided on each floor, and on some floors a small dining room is provided for patients in the "dressing-gown" stage of recovery; that is, patients who are able to leave their beds, but are not strong enough to go to the congregate dining room in another building.

The First Floor (Fig. 3) is the Reception and Observation section, and includes an admission room, equipped with a special admitting bath, near an ambulance entrance on the rear of the building. An isolation section is also provided on this floor.

The new Infirmary Building is directly connected on each patients' floor with the central Administration Building of the institution. (See Figs. 2 and 3.) The latter building contains the

ultra-violet transmission glass for sun treatment in cold or inclement weather. A lamp room, equipped with carbon arc lamps, is also included, and will be used alternately for men and women. The usual dressing rooms and lavatories are provided for each sex.

This description of the new Infirmary Building may fittingly be concluded by a quotation from an address given a year ago by Dr. David R. Lyman, the well-known tuberculosis specialist, who said:

"It has been repeated so often and by so many authorities that it is almost trite to call attention to the fact that a sanatorium for tuberculosis no longer relies entirely upon rest, air and food for the treatment of its patients.

"Those of us who operate institutions constructed along the lines thought best twenty years ago regret every day of our lives that we have not

the means to rebuild them nearer to our heart's desire. We discovered long ago that to give our patients the best chance of life we needed facilities for bed care and for general medical study on a par with those provided by the best modern hospitals."

It is believed that this new Infirmary Building complies fully with the requirements set forth by Doctor Lyman.

Community Building

This building (Fig. 5) is so located that it is readily accessible for walking patients, but it can also be easily reached by Infirmary patients in wheeled chairs; as the building is connected with the several patients' units by an enclosed walk, or corridor.

Another consideration in selecting the location for this building was the desirability of visitors being able to reach it without entering the grounds between the patients' buildings; as the noise of arriving and departing automobiles is very disturbing to sick persons.

With these factors in mind, a location was selected on a sloping part of the grounds, so that the building is of one story in height at one end—the east—and two stories in height on its west end. The upper story is on a level with the lower floors of the general group of patients' buildings, and the lower story is on the level of a road by which visitors can reach the building. (See Fig. 6.)

In many sanatoriums, the Assembly Hall is used for religious exercises, as well as for concerts and other forms of entertainment. In this instance, however, a study of the religious affiliations of the patients, and also of the personnel, indicated that it would be desirable and necessary to provide a separate Chapel for the use of the majority of them. (See Fig. 7.)

It will be noted that a covered walk on each side of the Chapel leads to a fine Assembly Hall, which seats 400 persons. At one end of the hall is a commodious stage, with a dressing room adjoining. At the other end is the patients' library, which will be used by walking patients, and will also serve as the center from which book wagons will be taken to the rooms and wards occupied by patients who are not able to walk to the library. Adjoining the library is a kitchenette, for the serving of light refreshments at social gatherings of the patients. Provision is also made for the projection of moving pictures.

Two classrooms are also included on this floor. These rooms may be used for instruction in commercial subjects, such as typewriting, shorthand, bookkeeping, etc., which offer good possibilities

of suitable employment for arrested cases after discharge. These classrooms may also be used for the instruction of patients who wish to improve their general education; an opportunity of which it has been proved that many sanatorium patients are glad to avail themselves.

Retiring rooms for patients and visitors are provided at convenient points on this floor. An office for the Chief Occupational Therapist is also included.

The accommodation on the First Floor (Fig. 6) includes two commodious, well-lighted and airy workshops; with the usual storerooms, lavatories, etc.

It is intended that one of these workshops shall be used for arts and crafts, and the other for printing; the latter having been for some years successfully carried on as a form of curative occupation for the patients in this sanatorium, who produce an attractive monthly magazine, "The Buzzer."

As mentioned above, the public entrance for visitors is on this floor.

The mechanical equipment of the special ventilating system for the Chapel and the Assembly Hall is also located on this floor.

Why the Painted Wall Is Popular in Hospitals

That the painted plaster wall, because of its sanitary qualities, is effective in combating disease is shown by investigations by medical authorities.

In one lying-in hospital, when the walls had been painted, puerperal fever became practically nonexistent. Previously within a short period there had been more than 600 cases with a high death rate.

The results of an experiment by a pathologist in a Washington hospital showed that in the preparation of vaccines and antitoxins in an unpainted room the cultures became contaminated. When the walls were painted, results were successful.

Cases such as these explain why painted walls are used almost universally in hospitals. A rough or even a hard surfaced cement or plaster wall of any kind or a wall made of wood is porous, and may therefore absorb and retain moisture for long periods. Then, too, the small craters of its surfaces collect organic matter that cannot be removed by washing. Such conditions facilitate the growth of bacteria. When a paint that can easily be washed is used, these conditions are eliminated, says a recent publication in an article on the subject.

Canada Sets a Precedent in Hospital Service

By C. J. DECKER

Superintendent, Toronto General Hospital, Toronto, Canada

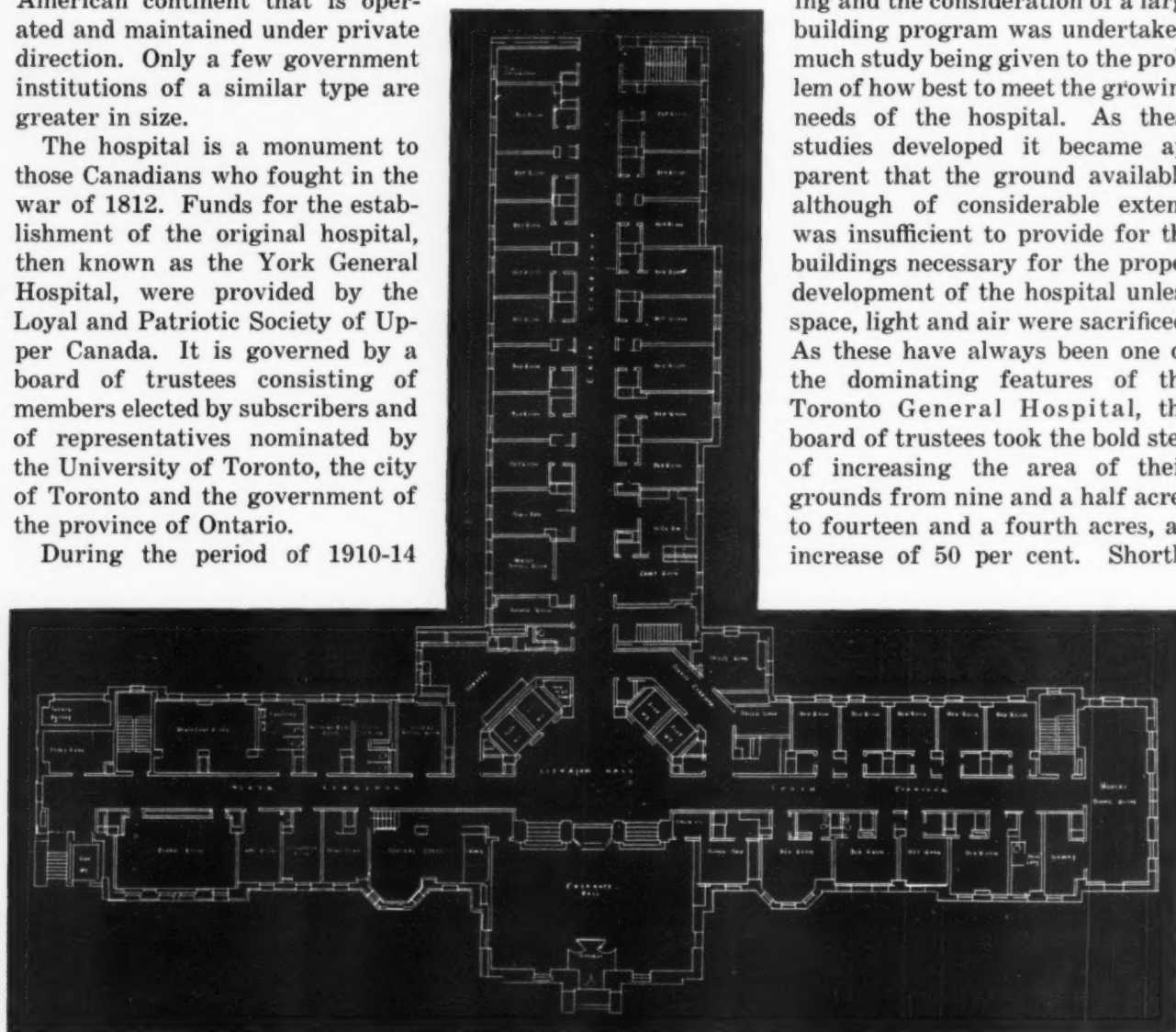
THE Toronto General Hospital as it stands to-day is the largest hospital on the North American continent that is operated and maintained under private direction. Only a few government institutions of a similar type are greater in size.

The hospital is a monument to those Canadians who fought in the war of 1812. Funds for the establishment of the original hospital, then known as the York General Hospital, were provided by the Loyal and Patriotic Society of Upper Canada. It is governed by a board of trustees consisting of members elected by subscribers and of representatives nominated by the University of Toronto, the city of Toronto and the government of the province of Ontario.

During the period of 1910-14

Administrative facilities as well as private and service rooms are grouped on the main floor of the new pavilion.

most of the present buildings were erected. By 1925, however, the need for expansion became pressing and the consideration of a large building program was undertaken, much study being given to the problem of how best to meet the growing needs of the hospital. As these studies developed it became apparent that the ground available, although of considerable extent, was insufficient to provide for the buildings necessary for the proper development of the hospital unless space, light and air were sacrificed. As these have always been one of the dominating features of the Toronto General Hospital, the board of trustees took the bold step of increasing the area of their grounds from nine and a half acres to fourteen and a fourth acres, an increase of 50 per cent. Shortly



afterward plans for new buildings, for extensions of several old buildings and for the rearrangement of others took definite shape, and construction work was begun.

First the public wards were extended so that their bed capacity was increased by 112, or 20 per cent. Many of their services were improved and accommodations for the x-ray department were practically doubled.

Next came the new private patients' pavilion, a large structure ten stories in height with a capacity of 345 beds. Several novel features were incorporated in the design of this building.

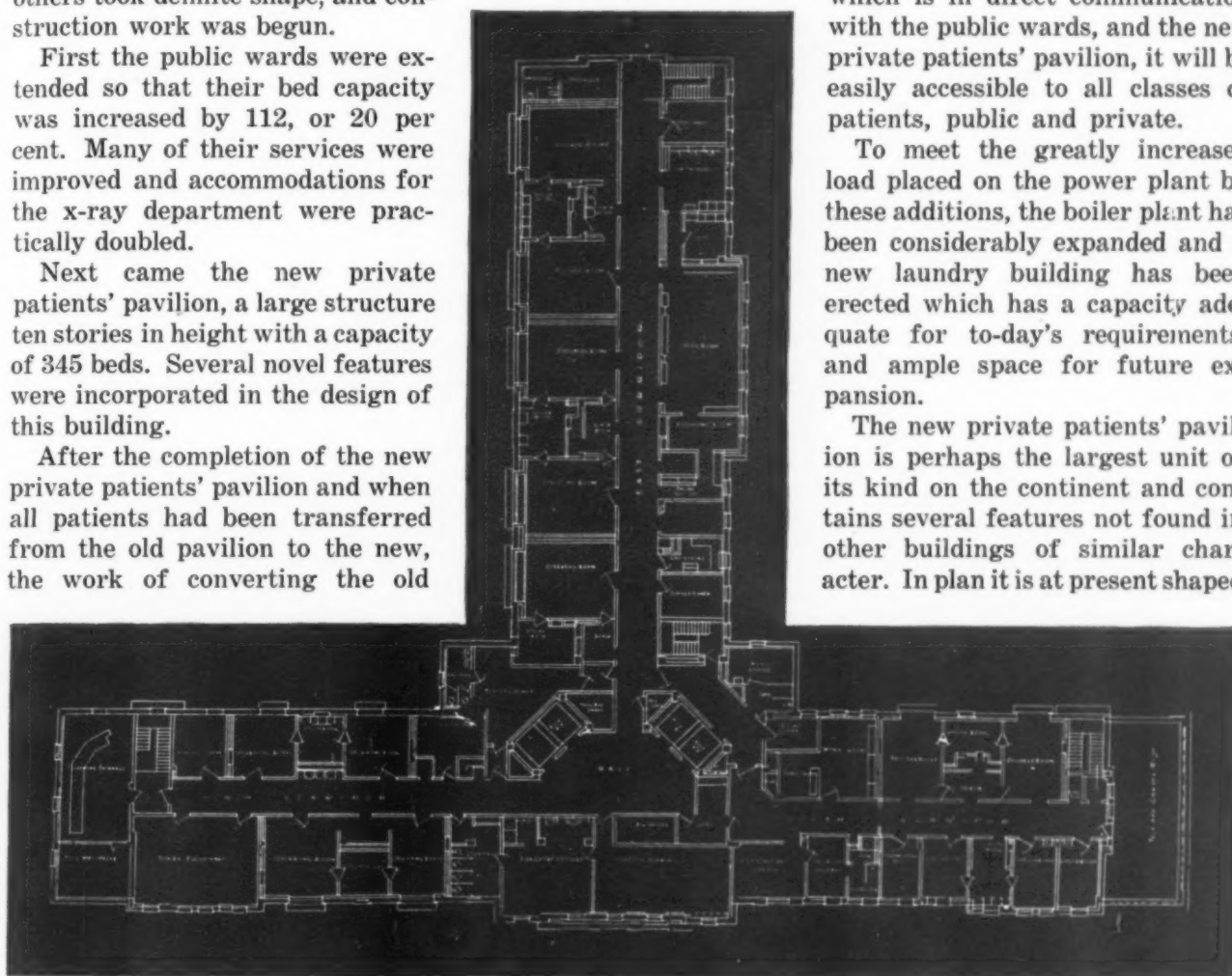
After the completion of the new private patients' pavilion and when all patients had been transferred from the old pavilion to the new, the work of converting the old

All operating units, including those for obstetrical purposes, are on the ninth floor, together with service and workrooms.

will be used for an x-ray building. Since it stands immediately between the out-patients' building, which is in direct communication with the public wards, and the new private patients' pavilion, it will be easily accessible to all classes of patients, public and private.

To meet the greatly increased load placed on the power plant by these additions, the boiler plant has been considerably expanded and a new laundry building has been erected which has a capacity adequate for to-day's requirements, and ample space for future expansion.

The new private patients' pavilion is perhaps the largest unit of its kind on the continent and contains several features not found in other buildings of similar character. In plan it is at present shaped



building into a nurses' residence was started. With the expansion of the hospital the housing for nurses had become entirely inadequate, and to meet the need of proper housing space it was decided to utilize the old pavilion. The necessary changes were made and at the same time space was found for classrooms, lecture rooms and demonstration rooms in which the training of the nurses could be carried on more efficiently.

Arrangements were made with the University of Toronto whereby the university agreed to vacate the old pathological building and to move into a new building, to be erected immediately opposite the main building of the Toronto General Hospital and connected with it by a tunnel under the street. This plan has been carried out and the university now occupies the new building which is known as the Banting Institute.

The old pathological building, which lies immediately north of the new private patients' pavilion,

like a T but it is so arranged that in the future, when conditions demand it, another wing can be added at the foot of the T thus converting the plan to the shape of an H lying on its side. At present on each floor the nurses' station and the control desk are at the junction of the cross-head and leg of the T and in the future when the new wing is added, another nurses' station and control desk will be placed at the junction of the new cross-foot with the existing leg of the T. This arrangement reduces to the minimum the average length of travel for nurses between their stations and the patients' rooms. It also enables the clerks at the control desks to have an unobstructed view of all corridors. Since all main elevators are grouped at these junctions the control desk clerks can readily deal with patients or visitors arriving on the floor. The arrangement thus briefly outlined is the governing principle of the plan and necessarily controls the whole design.



In the nursery sections on the seventh and eighth floors the windows have glass that admits ultraviolet rays.

The system of food service in this building is unusual. While somewhat similar systems may be found in a few hospitals in the United States, nowhere has the food service been attempted on a scale comparable to that employed in this building. To overcome the waste inherent in the floor pantry and diet kitchen system, a regulation was made that no food whatever was to be kept anywhere in the building except in the main kitchen where it would be under the direct control of the chief dietitian. No food supplies of any kind were to be kept on any floor and all orders for between-meal nourishments were to be transmitted to the central kitchen staff which would fill those orders and dispatch them to the various floors from which they were ordered. The solution of the problem was found in the system that is briefly described here.

The kitchens and storerooms are in the basement under the leg of the T, which places them

conveniently for the present plan of the building and centrally for the completed plan. They are in operation twenty-four hours a day. Direct connection between the kitchens and the service rooms on the patients' floors is provided by means of two electrically operated conveyors for the service of the regular meals and two high-speed dumbwaiters for the service of between-meal nourishments. The method employed to serve one of the regular meals is interesting as well as remarkably efficient.

Some time before the meal is served all trays are set up and on each tray is placed a card designating the room for which it is intended, the type of diet required and the items of the menu requested by the patient. Adjoining each conveyor, and connected with it by means of a traveling belt, is a long double fronted serving table with the traveling belt passing between its two sections. On each side of this unit are stationed members



The private room pictured here was planned to provide every comfort for the patient.

of the kitchen staff each ready to serve the food, beverage or equipment allotted to his care. As the tray passes along on the belt the food, beverage or other articles called for by the card are placed on the tray, and before it passes into the conveyor each tray and its contents are examined and checked by one of the dietitians. Having passed this inspection, the tray is automatically transferred to the vertical conveyor which transports it to the service room of the floor to which it is assigned. At this point are stationed floor maids who take the trays from one of the kitchen staff (who actually removes them from the conveyor as they arrive) and carry them immediately to the patients' rooms. All trays for each floor are dispatched as a batch, and after their arrival the destination of the conveyor is switched to another floor.

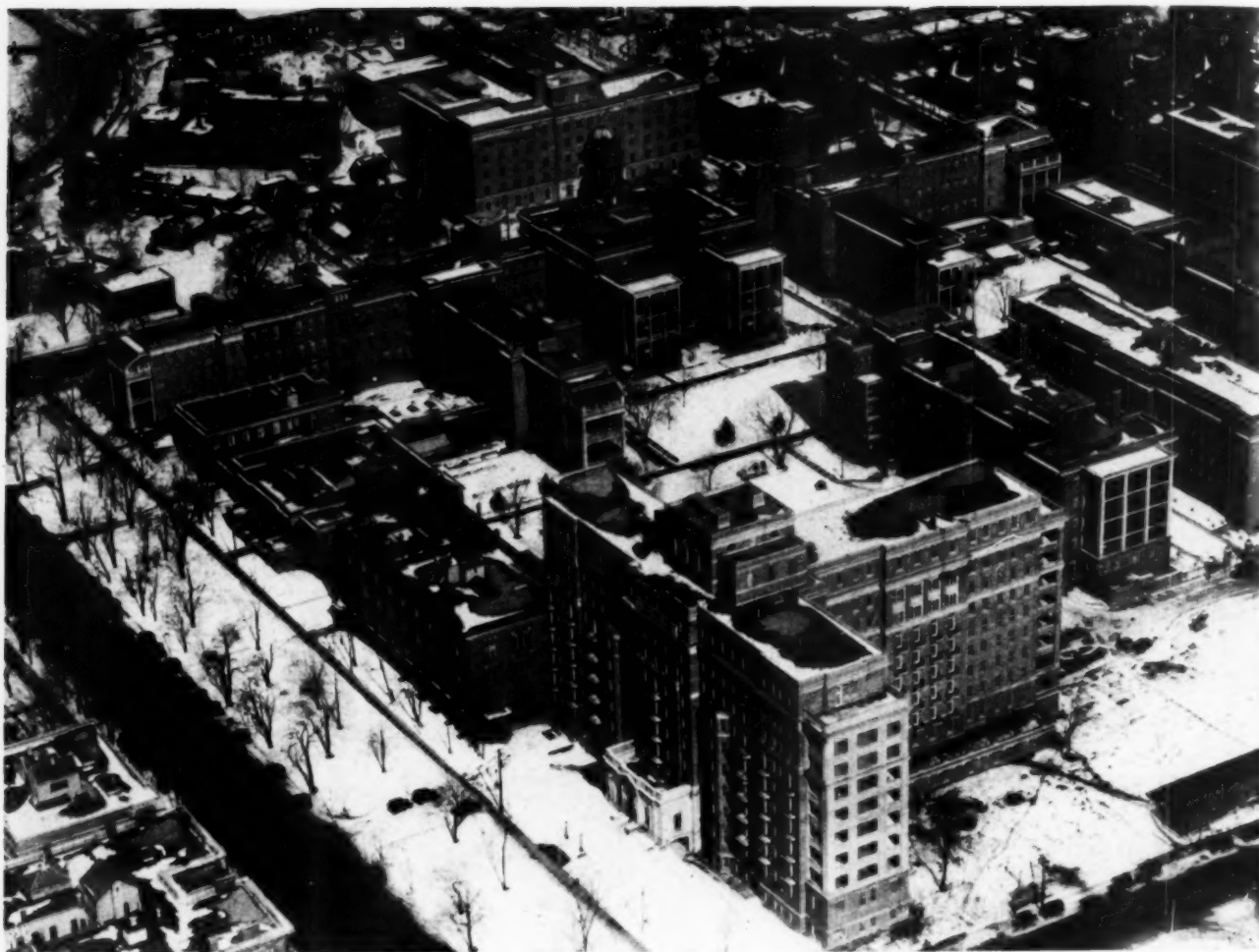
Actual experience shows that within three minutes of the time it leaves the serving table in the

kitchens the tray is in the patient's room and that all the patients in the building are served within thirty minutes.

After all trays have been sent, the vertical conveyors are reversed and trays are returned to the dishwashing rooms where they are automatically removed from the conveyors and carried by traveling belts to the dishwashers.

Orders for between-meal nourishments are given to the floor control desk clerk by the patient's nurse or by telephone from the room. The order is then transmitted by telautograph to the kitchen where it is at once prepared and sent to the patient by means of the dumb-waiter. By this system every order for such nourishment is recorded by the telautograph.

In addition to the patients' service, the kitchen supplies the needs of the nurses' cafeteria, which has a seating capacity of 170, and also the cafeterias for the male and female help employed in



The new pavilion is shown at the lower right of the aerial photograph above. The food service is unusual in that no food is kept anywhere except in the main kitchen under the direct control of the dietitian and is dispensed by a unique electrical apparatus to the patient floors.



the building. There are also two small dining rooms with waitress service. One of these is for the medical staff and the other for patients' visitors, each with a seating capacity of forty persons.

Another feature of the building is that all operating units, including those for obstetrical purposes, are on one floor, the ninth, together with all their service and workrooms. There are ten operating and five obstetrical units on this floor. Two floors, the seventh and eighth, are set aside for maternity cases. The windows and balconies of the nursery section are of glass that admits ultraviolet rays.

Every patient's room is equipped with a telephone by means of which patients may transmit their orders or calls for nurses. For those unable to use the telephone there is provided an ordinary push button cord with direct buzzer connection to the hospital switchboard. All signals, as well as requests for service, are received by the telephone operators and transmitted to the respective floors by telautograph. A complete record of all calls is kept, thereby enabling the administration to trace quickly any errors or omission of service that might give rise to criticism. All calls are answered in less than three minutes, the average lapse of time being two minutes.

None of the usual signal systems generally found in hospitals has been installed in this building, reliance having been placed on the buzzer-telephone system already described. Results have shown that this system gives better and quicker service than any of the generally adopted systems that were used in the earlier buildings of the Toronto General Hospital.

The development of this novel system of communication, by means of telephone, telautograph and buzzer, is the result of patient research and investigation. Through its use have been eliminated most if not all of the complaints so often registered by patients about slow and inefficient service.

Darling and Pearson, Toronto, were the architects for the private patients' pavilion.

Outdoor Relief Agencies and Their Accomplishments

The citizens of New York City contribute nearly \$14,000,000 a year for the work of their "outdoor relief" agencies—organizations giving assistance to persons in their own homes—but this sum is just about one-tenth of one per cent of the assessed wealth of the city, or only one-fifth of one per cent

of the total current income of the people in this city. This is disclosed by a study of the income and expenditure of all local welfare agencies over the seventeen years of 1910 through 1926 just completed by the Welfare Council of New York City.

A tremendous growth in the number of dollars given out directly for outdoor relief is evident. This amount rose from less than a million in 1910 to over eight millions in 1926. More than five million dollars of the latter total represents the disbursements of the board of child welfare to widows and other dependent mothers. In addition to the eight million dollars spent for direct relief, in 1926, one and a half million dollars was spent for administration and service incidental to relief and two and a half million dollars was spent by the privately supported societies for the many other forms of social service which family and relief societies are called on to render in their efforts to put individuals and families back on the road to self-support and self-respect and to enable them to live the normal and happy lives to which they are entitled.

Amount Spent for Relief Greatly Increased

Accordingly, to give an accurate picture of the extent to which material relief to the poor has been increased in New York City the Welfare Council's research bureau presents its findings also in dollars of constant purchasing power or 1914 dollars and on a per inhabitant basis. Even on this basis, the report says, the relief agencies were able to give more than three times as much help to the poor in 1926 as in 1910. The expenditures of these societies in 1914 dollars—including both the municipal and the privately supported—amounted to twenty-nine cents for each inhabitant in 1910 and ninety-four cents for each inhabitant in 1926. The expenditures of the municipal relief agencies jumped from six cents in 1919 to fifty-nine per inhabitant in 1926 and those of the privately financed agencies from twenty-three cents to thirty-five cents per inhabitant during that period.

"During the period of the study," the report says, "an amount equal to less than 4 per cent of the relief given out by the public agencies has been spent in service and administration. For the private agencies, whose program for relief is closely bound up with the processes of rehabilitation, an average amount of about 54 per cent during the seventeen years was expended for investigation and service in the family service departments. This amount is exclusive of the provision of such services as clinic assistance, recreation and day nurseries."

Editorials



Sterilizing Standards

THE names of Pasteur and Lister will forever be held in esteem by mankind because of their contributions to our knowledge of the cause and hence the prevention of infectious diseases. Many modern processes intended to destroy or to inhibit the growth of bacteria bear their names. The corner drug store prominently displays numerous articles bearing, in more or less mutilated form, the names of these distinguished scientists.

In the hospital the safety of patients depends upon the use of supplies, solutions and instruments that are free from bacteria. But the various types of apparatus constructed for subjecting these articles to high degrees of temperature appear to have reached a greater measure of perfection than has the technique employed in their use.

There must be a method of choice—one of greatest efficiency and safety—for carrying out every step in the process of sterilization, for rendering each type of article free from germs. If this is the case, why should not the best method or methods be adopted as standard? For example, if dressings can be safely sterilized by exposure to steam at fifteen pounds pressure for thirty minutes, why do many hospitals employ twenty or forty or sixty minutes for this same procedure? If color indicators are safest as denoting that sterilization has actually taken place, why should steam gauges be employed for this purpose? As a matter of fact, such a gauge simply registers pressure and not the degree of temperature to which the contents of the apparatus are being exposed. A high reading may be produced by air as well as by steam and offers no proof at all of sterilization. If soda or carbolic acid added to the water in the instrument sterilizer is advantageous, why do not all hospitals employ these chemicals in this manner? If boiling instruments for five minutes is sufficient, why do many institutions adopt a ten, fifteen or twenty-minute period as necessary for this purpose? If gloves are most certainly rendered sterile by boiling or by autoclaving for ten minutes at fifteen pounds pressure, why should there be found almost as many techniques for sterilizing gloves as there are hospitals?

Enough of examples as to the chaotic condition of the common procedure of rendering hospital instruments and supplies sterile. It is fortunate that so few disastrous occurrences happen from the accidental use of unsterile articles. What is the best procedure? How and by whom shall it be discovered and put into general use? A compilation of existing practices appears to be the first step that should be taken. A scrutiny of the truth of current belief, by applying thereto the acid test of modern bacteriology, can only prove beneficial to the cause of the patient who places his life in the hands of the hospital and of the surgeon performing the operation.

The Menace of Static Electricity in Operating Rooms

RECENT newspaper accounts of the explosion of an anesthetic in a California hospital operating room, which resulted in the death of a woman about to undergo an operation, tend to create a feeling of fear on the part of the public.

The possibility of such an accident occurring is about the last thing that the average person would think of in connection with a hospital operating room. While the circumstances of this unfortunate occurrence have been verified it should not for a moment be assumed that such accidents in operating rooms are common. As a matter of fact they are decidedly rare, their infrequency often serving to render it difficult to convince persons that any danger of this kind exists in connection with anesthesia.

During the past two years the National Board of Fire Underwriters has been cooperating with the hospitals of the country in making operating rooms thoroughly safe with special reference to anesthesia. During this period it has suggested the safeguards required in individual cases. A Pacific Coast representative of the Board of Fire Underwriters, with the cooperation of the hospital, had inspected this particular operating room and his recommendations were in process of being carried out when the accident occurred. Immediately following this occurrence an investigation of the circumstances was made.

The investigation showed that the anesthetics employed were the best obtainable and that the anesthetist was a graduate of experience. These facts, supplemented by the testimony of others present, seem to justify the conclusion that carelessness was in no way responsible. The explosion was made possible by the fact that ether, the principal anesthetic employed, gives off vapor which

when mixed with air or oxygen in proper proportion is inflammable and explosive, just as is the vapor of gasoline. Oxygen, while in itself not inflammable, supports combustion and also forms explosive mixtures with ether vapor. Nitrous oxide, the other anesthetic that was being used, is practically not inflammable in itself, but will support combustion.

In other words, the patient was inhaling an inflammable and explosive mixture of anesthetics. This in itself is not unusual as it is a condition that probably exists during at least some periods of practically all operations where oxygen is employed. On the other hand, this fact and the very presence of an inflammable vapor in the operating room justify the removal of all sources of ignition, such as open lights, and such electrical equipment and apparatus as would be liable to form sparks or arcs.

To those competent to judge it appears plain that the ignition of the mixture was not brought about by contact with an arc from electrical equipment or other open flame. No cauteries or "radio" knives were being used and apparently there was no other surgical equipment in use that would in any way create a spark. If the vapor had traveled a considerable distance and had become ignited by contact with nonvaporproof electrical devices there would have been a flash from that device to the operating table and all present would have seen it. Further, the patient's clothing and probably that of the persons gathered around the operating table would have been burned or at least singed by the flash fire. The only indication of ignition, aside from the explosion itself, was the presence after the occurrence of a slight deposit of soot upon the face of the patient between the chin and the lower lip. This would imply that ignition occurred locally, that is, close to the patient's mouth. Thus in the absence of the sources of ignition already mentioned the cause must be sought elsewhere, and in this particular case it seems that the only other means of causing ignition was static electricity.

It appears that the operating table was insulated from the floor; the patient was in turn insulated from the table by a rubber sheet; the anesthetic machine was insulated from the floor, and the anesthetist was also insulated by his rubber heels. Under these conditions there are two corrective features that would have prevented a static discharge. The first, and the safest and easiest to put into effect, is proper humidification of the air, since it is a well established fact that when moisture is present in the air in certain proportions the static charge does not develop or does not accumulate in dangerous quantities. The second corrective feature is to connect the patient, the

operating table and the anesthetic equipment and the anesthetist by some material that forms a good electrical conductor, which will permit the static electricity to pass harmlessly from one object to another without forming the spark or arc necessary for the ignition of the anesthetic vapors. Such a system of continuous connection, with the addition of a connection to the floor and to structural steelwork or waterpipe, is stated by the National Board of Fire Underwriters to be essential when humidification is not employed.

Static or frictional electricity is created by frictional contact of materials or objects that are in themselves conductors of electricity with materials or objects that are not electrical conductors. Thus in a dry atmosphere, discharge of a gas through a pipe or hose can cause a charge of static which will remain there like a pool of placid water until contact is made with some material that is an electrical conductor. In the same way, a charge may be built up upon an object that is itself an electrical conductor but is so insulated as to prevent the passage of the charge to another conductor.

From this it should not be inferred that this hazard of static electricity is always present in an operating room. Such is by no means the case, especially where proper humidity exists. The exact laws governing the creation of static electricity are not well known and apparently do not follow any well defined rule. It is known, however, that clear cold dry days form conditions favorable to the creation of static. It should also be recognized that in all probability the accident previously referred to was brought about by an unusual combination of circumstances.

The records of the many years' use of anesthetics in the thousands of hospitals of the country show that such accidents seldom occur, and that there is no need for great public alarm over this one case as a potential hazard of great moment. Even one instance of death, however, should be an object lesson sufficient to assure that all our American operating rooms, where inflammable anesthetics and oxygen are given, are properly humidified and suitable static grounds applied.

The State Meetings

WE ARE entering into the season of state conventions for hospital superintendents. Hospitals have had a poor year, according to some reports, and programs for the state meetings should leave no stone unturned to emphasize the many ways by which they can make up for some of their losses.

One superintendent at a meeting of a program committee pointed out that it is impossible to re-

duce operating costs further, that hospitals unlike many other businesses never have been wasteful of their funds and, furthermore, that it is extremely poor business to cut down on the one thing hospitals have to offer the patient—good service. After these remarks the program committee entered into side talk that consumed much of the conference time as to how hospitals could increase their revenue without cutting down expense and the result was that the program took on an extremely practical tone.

There are many ways in which hospitals can add to their income, and the associations should be mindful that this is the time to bring forth every idea from whatever source possible.

Then there is the matter of collections that needs stressing at this time. While business has kept up in nearly all hospitals, the trouble has been with collections and also with the renting of the higher priced private rooms. Both of these conditions can be remedied and both of them should give us cause to see if we cannot profit by the mistakes of the past.

The state meetings should be well attended this year, better attended than usual provided the programs are made practical and of actual value to those who attend. Every progressive superintendent should scan each program carefully, prepare for himself a list of questions that he wants answered and then go to the meeting with a full determination that he is going to return to the hospital with several ideas that will more than pay for the expense and time he has spent away from home. It will be interesting to see if there is a falling off in the attendance at these meetings this year and, if so, whether this happened because the programs were not practical enough to attract the members.

Getting the Trustees' Interest

IT IS heartening to note that trustees of hospitals seem to be taking a greater interest in their institutions than formerly. Whether this is because of a reduction in revenue or because the trustees themselves have more time on their hands are matters of conjecture. Recently we have received more letters from hospital trustees asking for information of hospital administration, fund raising, community relations and other questions than ever before, and other organizations with the interest of the hospital at heart have also reported the same condition.

In Pennsylvania there has been formed an association of trustees. This organization has held its first meeting, elected its officers and is prepared to function on an intelligent basis. True, in Penn-

sylvania the hospitals are held together through the mutual bond of state grants, but there is no reason why other states should not follow the example of Pennsylvania in the formation of trustee associations.

The superintendent of the hospital should see to it that the trustees are encouraged in this search for learning and should bring to their attention articles that will help them better to perform their duties.

We are apt to build up a defense for the trustee who does not devote time to the hospital with the plea that he is a busy man and has many outside interests. This is not or should not be wholly true. In New York City, one of its busiest citizens, Howard Cullman, has plenty of time to devote to being a member of two boards of trustees. In addition he is one of the commissioners of the Port of New York Authority, a leader in his political party and a director in three or four welfare organizations. Despite these activities he still has time to conduct a large business enterprise. Probably few trustees have as many activities claiming their time, but, of course, it is always an easy matter to give lack of time as an excuse for lack of interest.

De Rebus Sanitas

THE hospital should be a model of sanitation for all other institutions to emulate. Cleanliness is a personal and institutional virtue, the absence of which is difficult to justify, but even the most casual observer must often note evidences of faulty housekeeping and of improper sanitary inspection in many of our best hospitals.

The art of performing proper sanitary inspections seems to be difficult for some executives to acquire and for others to practice persistently. To some administrators the distant corners of basements are immune from molestation. Garbage pits are often as assiduously avoided as they are offensively odorous. Fly breeding locations often flourish during the heated periods and roaches and other vermin are permitted to flourish in kitchens and storage spaces without hindrance. The superintendent's periodic sanitary inspection of the hospital should have as one of its objects the eradication of all insanitary conditions, whether they are in the basement or the attic. There should be no place in the institution that is unvisited by the administrator. Above all, the training of this officer should be such that he is able not only to recognize the presence of potential disease producing conditions but also to prescribe an effective remedy therefor.

Practical Administrative Problems:

Increasing the Income Through Public Support

By JOSEPH C. DOANE, M.D.

Medical Director, Jewish Hospital, Philadelphia

IN THE February issue of this magazine, there appeared the initial article of a series that will aim to describe some methods by which the income of the hospital may be increased. Certain matters were discussed dealing with investments, loans and mortgages, so far as they affect hospital finances. The various sources from which the hospital usually obtains its income were enumerated, and the article included a table showing the manner in which eleven hospitals in an Eastern city met their expenses.

Since it seems expedient further to discuss various statistical statements set forth in that table, it is reproduced here as Table I. In addition, two other tables that are not only interesting but are explanatory of Table I are given here.

It will be noted that the percentage of expenses met from board in this group of institutions ranged from 9 to 68.3. These figures are confusing unless the nature of the institution and the type of its clientele are understood. In Hospital D, for example, it is seen that 63 per cent of its expenses were met from board, with a paper profit at the end of the fiscal year of 1 per cent, while

in Hospital C, but 68 per cent of its expenses were met from board, and at the same time this institution showed a paper operating profit of 21 per cent.

Such statistics are confusing unless it is remembered that Hospital D is a private institution rendering little free service and receiving, at the same time, 4.7 per cent of its income from a welfare federation. In the succeeding period of six months, during which a new plant was occupied, the institution earned from all sources 99 per cent of its expenses. Such a financial showing is a rare occurrence among hospitals in the field. Moreover, in the average community hospital from which much free service is expected, no such earning possibilities exist. In the case of Hospital C, a large endowment made possible the surprising paper profit of 21 per cent. The percentage of free work performed by each of these institutions is shown in Table III, all of which is explanatory of the incomes set forth in Table I.

In the case of Hospital J, it will be noted that it derives but 9 per cent of its expenses from board, and that it meets its remaining obliga-

TABLE I—HOW EXPENSES WERE MET IN 1928

Hospital	From Board, Per Cent	Other Earnings, Per Cent	Total Earnings, Per Cent	Operating Deficit, Per Cent	Welfare, Per Cent	All Others, Per Cent	Deficit or Profit, Per Cent
A	53.0	20.5	73.5	26.5	12.2	14.3	-----
B	45.0	20.4	65.4	34.6	14.5	1.2	-18.9
C	68.3	25.7	94.0	6.0	-----	27.0	+21.0
D	63.0	24.0	87.0	13.0	4.7	84.0	+ 1.0
E	52.7	35.3	88.0	12.0	-----	11.0	+ 1.0
F	47.8	1.2	49.0	51.0	16.4	35.0	+ 0.4
G	56.9	23.6	80.5	19.5	16.0	5.8	+ 2.3
H	43.4	9.8	53.2	46.8	23.0	15.0	-18.8
I	64.5	17.5	82.0	18.0	32.0	6.2	- 8.6
J	9.0	6.5	15.5	84.5	56.6	26.0	- 1.9
K	19.3	2.1	21.4	78.6	57.2	24.2	+ 2.8

TABLE II—ANALYSIS OF INCOME FROM BOARD

<i>Hospital</i>	<i>Private Room</i>	<i>Ward</i>	<i>All Others</i>	<i>Percent. of Income</i>	<i>Percent. of Expense</i>
A	\$4.58	\$1.81	\$3.02	72	53
B	5.57	2.55	3.73	67	49
C	5.80	1.34	2.53	70	68
D	6.32	3.46	4.10	69	67
E	3.53	1.18	2.13	59	53
F	-----	-----	-----	96	47
G	4.63	1.73	0.99	70	57
H	6.70	0.71	2.64	59	32
I	5.16	2.96	3.05	79	55
J	4.59	0.32	2.19	59	9
K	3.07	0.16	0.43	78	19
Totals	\$5.10	\$1.01	\$2.17	70	49

tions as a result of funds received from a welfare federation and from other miscellaneous sources. This is a charitable institution caring for children of parents of the lower economic class. Hence, it is easy to understand why the amount of income that it receives as the result of the sale of its services is small.

In the case of Hospital F, there is little endowment, as is also the case in Hospitals J and K. The same group of hospitals is employed to show the variance in ward and private patient per diem incomes and to compare the percentage of expenses met thereby. It will be seen that Hospital D, for example, earns a high average income from each private and ward patient and that its total average earnings per day per bed exceed those of all other institutions in this group.

In analyzing the income that any institution derives from the board of patients one must take into consideration the type of service it has for sale as well as the economic grade of its clientele. Hospital D not only performs a small amount of free ward service, as is illustrated in Table III, but also is able to charge and receive a greater amount of money for its ward service. In giving but 2.5 per cent of free days, this hospital in a measure places itself within the proprietary class, and hence deserves less consideration at the hands of a generous public.

Moreover, some information is gained as to the earning potentialities of an institution when it is considered that the hospital under discussion gave but one totally free day of service to every eighteen ward days. Such a statement draws attention to the fact that an institution that is giving one free ward day to every day for which it receives pay has much less reason to expect that its ward beds will in any measure pay for themselves.

There not only must be a definite balance between the number of private and ward beds an institution possesses, but also the rates charged for the use of private facilities must bear some relation to those exacted for ward service. For example, in Table II, it will be observed that Hospital H receives an average of \$6.70 per day for every private bed occupied but only \$0.71 per day for the use of each ward bed. If the cost per capita per diem of conducting this institution is about \$2.08, it is easy to understand a loss of 50 per cent on each day's operation.

Again, in the case of Hospitals J and K, a daily income of but \$0.32 and \$0.16, respectively, per ward bed reflects the reason for a daily loss per bed of \$4.49 in the former, but it does not explain the reason for a loss per bed per day of but \$0.62 in the latter. This is due to a large and generous grant made by the local community chest.

Table IV also illustrates the point under discussion. In Hospitals C and D, to which reference has been made, it will be noted that the per diem loss per bed was 20 and 14 cents, respectively, as compared with the loss per bed per day of \$4.49 and \$3.97 in Hospitals J and L, respectively.

Moreover, in consideration of the various sources of income that have been enumerated, a careful analysis must be made of the amount of money that the institution receives from its special and miscellaneous sources. In Table IV, these sums range from \$1.81 per bed per day to \$0.14 per bed per day. In this figure is included the income from endowments, cash contributions, federation grants, community drives and all other large and small sums that the hospital receives outside of the amount collected for board.

It is of interest also to note that almost as a routine the out-patient department is a financial

liability rather than an asset to the hospital. It has been stated on more than one occasion in this magazine that in itemizing the expense of conducting such a department, the cost of rendering service to each patient ranges from 50 cents to \$1.25 per visit. When it is considered that the income from the out-patient service in this group ranged from 1 cent to 26 cents per patient visit, a portion of the loss per bed per day is accounted for.

The limitations that lack of space impose on this article will not permit a full discussion of the suggested remedies for this out-patient loss. In a later issue, more detailed discussion of this problem will be set down. Suffice it to say that the adoption of such policies as the inauguration of pay clinics charging more than a cost price, the carrying of a part of this loss by the community chest, or preventive clinics should be seriously considered as a possible remedy.

It can be seen, therefore, that every hospital must expect to earn from 20 to 40 per cent of its expenses in some other way than by the collection of board. In other words, for every service day rendered, it must expect a loss, as was experienced by the group of institutions under discussion, of from a few cents a day per bed in the case of quasi proprietary institutions to \$4 per day per patient in those carrying a full or excessive free load. As was intimated in a previous article, the amount of money that the institution may expect to accrue from endowments and investments cannot serve to meet this deficit.

Most hospitals are doomed to disappointment so far as the realization of any considerable amount

of money from cash contributions is concerned. As time goes by there is without doubt less and less direct individual contribution to the hospital's upkeep. This is the experience of most hospitals. Those who are inclined to make cash contributions to the hospital are much more likely to endow beds, if the sum given is small, while those of greater wealth leave bequests for the construction of institutional buildings.

Throughout the hospital field one frequently observes splendid new structures in an apparent state of disrepair, because they have been accepted from generously inclined persons without a sufficient sum of money being set aside as an endowment to ensure proper maintenance. Such buildings represent definite liabilities rather than the assets they first appeared to be. It behooves every institution, therefore, carefully to consider the wisdom of accepting bequests for the construction of new buildings unless it is possible to provide ways and means by which such structures can be maintained.

The amount of money that participating institutions may expect from community chests or welfare federations varies greatly with the accounting methods and financial policies of the particular organization of which they are cooperating agencies. Moreover, there appears to be a rising expectancy on the part of community chest institutions as to the amounts of money that they desire or require from such bodies.

This type of community cooperative effort places the hospital definitely as a community agency which is entitled to the combined support of all citizens living therein. But there is still

TABLE III—ANALYSIS OF SERVICES

<i>Hospital</i>	<i>Percent. Private Days</i>	<i>Percent. Ward and Baby Days</i>	<i>Percent. Free Days</i>	<i>Ratio Free to Ward and Baby Days</i>
A	49.0	51.0	12.0	1:4.3
B	50.9	48.1	14.8	1:3.3
C	31.8	68.2	9.3	1:7.1
D	56.8	43.2	2.5	1:18
E	46.5	53.5	26.0	1:2
F	25.0	75.0	37.0	1:2
G	38.0	62.0	37.0	1:1.6
H	42.3	57.7	7.0	1:8
I	39.0	61.0	48.0	1:1.25
J	31.9	68.1	4.0	1:17
K	2.5	97.5	56.0	1:1.7
L	3.0	97.0	50.6	1:1.9
M	25.0	75.0	11.0	1:6.8
Totals	34.0	65.9	24.2	1:2.75

much to be done from the standpoint of more closely bringing together all such institutions. It should be possible for such a federation to direct mergers, community hospital building programs and the stressing of intensive individual service along some definite line, while another institution supplies just as intensively and efficiently some other type of necessary medical care.

The methods by which federation grants are allotted must also be subjected to much revision before any firm business basis can be reached. In

necessary in the prosecution of educational programs or to cover the loss per patient visit in the out-patient department or to meet various other legitimate items should be included in computing the income that the hospital may expect from the community chest.

In further reference to the part that the income from endowments plays in meeting the hospital's maintenance cost, it should be remembered that in a decreasing degree hospitals to-day are dependent upon this source of income for any major aid

TABLE IV—A STUDY OF PER DIEM COSTS AND INCOME

Hospital	Per Diem Cost	Total Income Per Diem	Total Per Diem Loss	Per Diem Income, Board	Per Diem Income, Special and Miscellaneous	Total Per Diem In-Patient Income	Per Diem Loss on In-Patients	Per Diem Income From Out-Patients
A	\$3.69							
B	5.67	\$4.17	\$1.50	\$3.02	\$1.04	\$4.06	\$1.61	\$0.11
C	8.27	5.56	2.75	3.73	1.62	5.35	2.92	0.21
D	3.71	3.51	0.20	2.53	0.96	3.49	0.22	0.02
E	6.00	5.85	0.14	4.10	1.75	5.85	0.15	
F	4.03	3.55	0.48	2.13	1.34	3.47	0.56	0.08
G	4.50							
H	2.08	1.02	1.06	0.99	0.03	1.02	1.06	
I	4.69	3.74	0.95	2.64	1.03	3.67	1.02	0.07
J	9.61	5.12	4.49	3.05	1.81	4.86	4.75	0.26
K	3.41	2.79	0.62	2.19	0.55	2.74	0.67	0.05
L	4.70	0.73	3.97	0.43	0.14	0.57	4.13	0.16
M	3.09	0.76	2.33	0.60	0.15	0.75	2.34	0.01

some instances, this grant is based upon the amount of the institutional deficit, which is computed by estimating the sum that will represent the probable difference between the hospital's income from all sources and its maintenance cost.

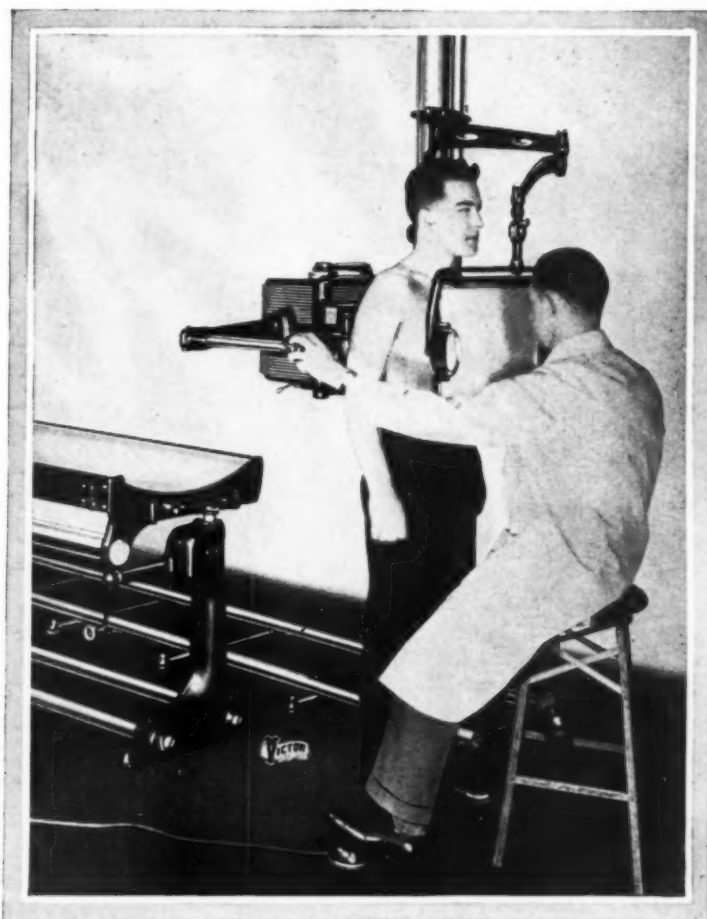
In the adoption of such a plan, it is presupposed that the deficit will represent the cost of providing free care for those who cannot pay for such service. This is not a sound method of allocating community chest funds. It appears that the hospital should expect no more from a community chest than a sum that represents the actual cost of the free service rendered. This amount cannot and should not be computed on any other basis than an effort to arrive at an amount that represents the total number of free days of service given, multiplied by the cost for each day's medical care of the indigent patient. On the other hand, participating agencies should expect community chests to reimburse them for the loss sustained by the rendition of totally free service and should also expect to be provided with a lump sum of money sufficient to cover the expense incurred on a per diem basis.

Funds to meet unusual expenses such as are

in their financing programs. In only one group of institutions in the Philadelphia survey, namely, those hospitals having 200 beds or over, did the income from endowments meet any considerable percentage of the cost of service. In this group, which included a number of large institutions that had been conducting their work during a period of many scores of years, it was found that about one-fifth of the income was derived from this source. In the general hospital group, showing an increase of five million dollars in maintenance costs during a period of ten years, there was a decrease of 3 per cent in endowment incomes.

It is interesting to speculate as to the effect that the acceptance of money from community chests has upon the public mind so far as its inclination to endow hospitals is concerned. Large sums of money are being turned over to foundations that have as their aim the experimental study of the cause and cure of some particular type of ailment, such as cancer or tuberculosis, rather than these bequests being directed toward the hospital. Institutional endowments are certainly less spectacular than such types of gifts. Nevertheless, this tendency to favor grants to foundations per-

THE PROFESSION RENDERS ITS VERDICT ON THE VICTOR SHOCK PROOF



This photo of a Victor Model "B" Shock Proof X-Ray Unit illustrates one of the many unusual adaptations of this type x-ray apparatus—vertical fluoroscopy without the use of roentgenoscope. The tube and high tension transformer being sealed in oil within the shock proof "head" precludes the slightest danger of electrical shock.

"Never Before Such Satisfaction"

"I HAVE used a wide variety of equipment in my twenty years of application to this work," writes the head of an X-Ray Laboratory, "and have never experienced before such satisfaction and pleasure in handling any apparatus as this. To one who admires fine workmanship, excellence of design and ease of operation, the Victor Shock Proof seems ideal."

The fact that members of the medical profession have invested well over a half-million dollars in the purchase of Victor Shock Proof Units, since this equipment was introduced a short time ago, is evidence of its merit. Let us send you an illustrated brochure and tell you where, in your vicinity, you will find a Victor Shock Proof in use. Write us today.

GENERAL ELECTRIC X-RAY CORPORATION

2012 Jackson Boulevard

Chicago, Ill., U. S. A.

FORMERLY VICTOR



X-RAY CORPORATION

Join us in the General Electric program broadcast every Saturday evening over a nation-wide N. B. C. network

haps represents but a temporary swing of the pendulum, rather than a permanent departure from the practice of making large gifts of this sort to hospitals.

This is neither the time nor the place for a discussion of the methods by which endowments may be secured. In a later article in this series, adequate space will be devoted to this topic. It may be said, however, that when a hospital receives a bequest of a large sum of money, this even represents more than a mere happy occurrence upon which no effort or time has been spent. Endowments do not descend like lightning from a clear sky. Perhaps for a decade or more, someone with tact and persistence has been interesting the donor in the work of the hospital.

How Deficit Bonds Solve One Problem

In a certain Eastern hospital with a large endowment fund a continuous and intelligent effort is being made to acquaint the members of its community with the aims and ideals of the institution. Solicitations for the meeting of the annual deficit by offering for sale deficit bonds in one hundred dollar denominations, the annual solicitation of a large group of persons to aid in supporting the pediatric department, the circulation of an interesting and attractive annual report, inviting the public to attend social events at the hospital, are methods that this institution has adopted to keep alive the public interest.

Perhaps even more effective than these methods are the quiet but persistent contacts that are daily made between the staff and administrative officers of the hospital and the wealthy men and women in the community.

As a further illustration of this possibility may be cited the gift of a building for the housing of dental clinics and oral surgical wards, which resulted from the casual interest of a wealthy citizen in this subject following a conversation with one of the hospital's staff. In another city, a hospital received the gift of a magnificent building, amply endowed, for the treatment of maternity patients, through interest aroused by the efficient and life-saving care given in this department to a member of the donor's family. In still another city, one views a splendid ear, nose and throat building for the housing of clinics and in-patients which resulted from the accidental opportunity of serving the daughter of a wealthy citizen from a distant city. And so, one might indefinitely illustrate the truth of the statement that endowments are not usually wholly accidental.

The policy of securing state or city subsidies for the hospital varies greatly throughout the hospital field. In one state, for instance, each legis-

lature appropriates an immense sum of money apportioned to over one hundred institutions in this commonwealth. In Pennsylvania, for example, as early as 1752, the commonwealth annually appropriated a considerable sum of money to one of its early hospitals. This grant continued for about fifty years. Not until three-fourths of a century later did hospital appropriations by the state assume any sizable proportions. In 1921 in this state about 86 per cent of the appropriations made by the legislature to private charitable agencies were to hospitals and similar institutions, while less than 10 per cent were to children's agencies, which, in reality, served as the original reason for the adoption of the policy of state aid. Much opposition to the state aid system has arisen from time to time. Moreover, it must be acknowledged that many abuses have crept into this practice. In Pennsylvania 156 hospitals received almost six million dollars in one year.

The discussion of the principle of whether or not state aid for hospitals is a sound policy is not pertinent to this paper. One may, however, state with emphasis, that such grants should be made on the basis of days of free service given.

Some Disadvantages of State Aid

The linking of political maneuverings and sharp practices with the granting of these sums is as objectionable as it is inefficient. Hospitals applying for state aid should remember that by accepting such grants they also subject themselves to a proper supervision by the state so far as book-keeping methods are concerned. Moreover, it is probable that endowments are less likely to be secured by the hospital that is known to receive state aid. This statement is exemplified by the fact that in a certain municipal institution (it matters not whether the financial aid comes from a state, county or a city) but one grant of this type has been received in almost 200 years of its existence. Moreover, it has been repeatedly observed that in institutions receiving no financial support from any political division, endowment incomes are many times greater than in those that do receive money from this source.

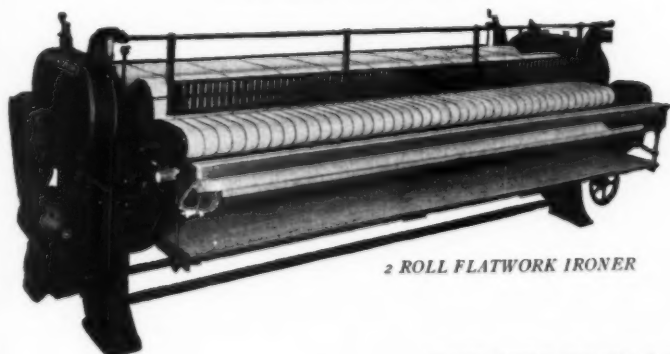
Attention is strongly directed to this fact, since there is a tendency in some localities to consider the advisability of turning privately conducted institutions over to municipal or county boards because of embarrassing difficulties that have been experienced in financing. As has been remarked, it would be far better for such institutions to demand financial aid on a per diem basis for treating indigent patients rather than to consider turning the control of the hospital over to a political body.

A COMPLETE ENGINEERING SERVICE FOR HOSPITAL LAUNDRIES

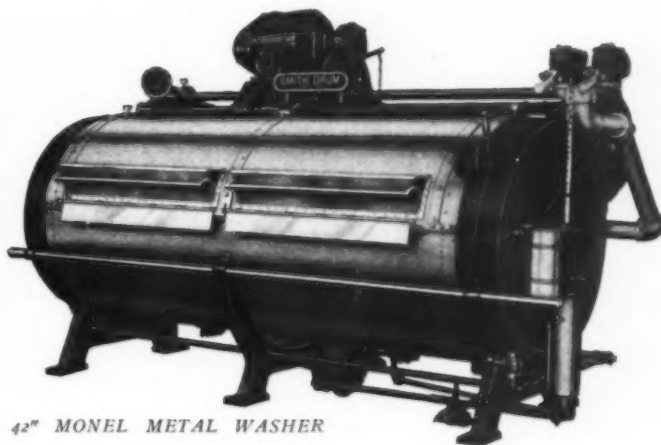
In addition to manufacturing a complete line of laundry machinery which has established a new standard of efficiency and value, the Smith-Drum Company offer the services of its staff of expert laundry engineers. If you plan a new laundry let us work with your architects. If you are remodeling or revamping your present laundry our engineers will make constructive suggestions including detailed blue prints and data covering time schedules, production capacity, costs, etc. This service is gratis and involves no obligation. Write for further details.

SMITH, DRUM & CO.

Allegheny Ave., below 5th. St.
PHILADELPHIA, PA.



2 ROLL FLATWORK IRONER



42" MONEL METAL WASHER

THE SMITH DRUM LINE

36", 42", 48" and 54" diameter monel metal shell and cylinder washers.

42" diameter blanket and all-purpose washer.

42" diameter drying tumblers.

2 roll single return apron type flatwork ironers.

4, 6 and 8 roll chest-type flatwork ironers, double return apron.

A FEW OF THE MANY HOSPITALS USING SMITH-DRUM EQUIPMENT

ISOLATION HOSPITAL, Hartford, Conn.
U. S. VETERANS' HOSPITAL, Livermore, Calif.

SHERMAN HOSPITAL, Elgin, Ill.
MINNESOTA STATE COLONY OF EPILEPTICS, Cambridge, Minn.

HAMTRAMCK MUNICIPAL HOSPITAL, Hamtramck, Mich.

BOSTON STATE HOSPITAL, Boston, Mass.
GARDNER STATE COLONY, East Gardner, Mass.

ATLANTIC COUNTY ASYLUM, Pleasantville, N. J.

CITY HOSPITAL, Syracuse, N. Y.
CENTRAL ISLIP STATE HOSPITAL, Long Island, N. Y.

N. Y. STATE HOSPITAL FOR TUBERCULOSIS, Ray Brook, N. Y.

KINGS PARK STATE HOSPITAL, Kings Park, N. Y.

ST. LAWRENCE STATE HOSPITAL, Ogdensburg, N. Y.

SAMARITAN HOSPITAL, Philadelphia, Pa.

"BUILDERS OF THE BEST—SINCE 1888"

SMITH-DRUM



NURSING AND THE HOSPITAL

Conducted by M. HELENA McMILLAN, R.N.
Director, School of Nursing, Presbyterian Hospital, Chicago

A Follow-Up Nurse Meets a Challenge

By MARY DUNWIDDIE, R.N.

Social Service Department, Milwaukee Children's Hospital, Milwaukee

"THE herding of infants in wards, where the individualization and mothering of the home are wanting, where exposure to infections of the respiratory tract leads to more institutional casualties than one can contemplate with serenity of mind and heart, is fraught with such danger that one often wonders if it were not better to abolish such wards altogether. . . . In our hospital we have tried to meet this situation by not admitting the case that is commonly admitted and by discharging others at the earliest possible moment. The baby clinic in the out-patient department has thus grown at the expense of the infant ward."

The paragraph just quoted is from an article by Dr. Joseph Brennemann, Chicago, published in the *American Journal of Diseases of Children*. Those of us whose work is closely associated with children's hospitals realize all too well the truth of this statement. When, on the other hand, home care instead of hospital care is advised by the doctor, one can scarcely comprehend the difficulties that present themselves to workers until some actual home problems defying the best made plans are encountered.

If in a given case the mother is intelligent and willing and home resources are sufficient to meet basic requirements, it is a fairly simple task to carry out a satisfactory home program with the guidance of a clinic doctor. It is when there is an unwillingness to cooperate on the part of the parent that we meet difficulties. A fretful baby may have disturbed the rest of hard working par-

ents for many nights; or possibly the baby has not responded to the treatment that has been advised and the mother loses faith in her ability to handle the situation; again perhaps the mother must work and there is no one at home to care for the baby, nor are there adequate funds to provide the food the baby needs. Perchance the mother may lack interest or may be unintelligent and may fail to care for her baby as she is advised in the clinic. Under such conditions and for such problems, the solution in the minds of parents and the general public is hospital care. It is to meet just such situations as these that an out-patient worker should become an integral part of the infant clinic machinery if the ideal of home care is to be attained. The success of her work will depend upon her understanding of the problem, her sympathy with the difficulties and her knowledge of human nature.

A Difficult Case

Recently our attention was centered on a case presenting so many obstacles that the worker despaired of ever reaching a satisfactory solution of the problem.

Mr. and Mrs. S., both deaf-mutes, were the parents of a month old baby. The parents had married against the wishes of the maternal grandparents, who refused assistance unless Mrs. S. would leave her husband and go to them. Mr. S. had been out of work for many weeks and could not provide a home for his family. The rehabilitation bureau had found work for Mr. S. as a farm



DINNER IS SERVED—SILENTLY

QUIET is the rule—almost a law—twenty hours in a hospital day.

Why should confusion—clang and clamor—be tolerated at meal time?

Too frequently the fault lies with make-shift methods of meal distribution—lack of system, inadequate equipment.

This phase of hospital service must be taken seriously. It requires technical knowledge, definite information, painstaking study.

Our fifteen years in the hospital field have proved this. That's why we maintain a research and development organization—that's why we insist on knowing a hospital's size, character and arrangement

before we will venture to propose a food conveyor system.

There's more to this business than just building food conveyors.

There's expert authoritative advice for one thing. And there's a guarantee of service almost anywhere at any time for another.

Most modern hospitals use food conveyors. Most food conveyors are Ideals . . . made only by

THE SWARTZBAUGH MFG. Co., Toledo, Ohio

Associate Distributor:

THE COLSON STORES Co., Cleveland, Ohio

with branches in

Baltimore	Chicago	Boston	Cincinnati
Buffalo	Detroit	New York	Philadelphia
	Pittsburgh		St. Louis

Operating Branch Sales and Display Rooms
 San Francisco Tacoma Los Angeles Portland
 Pacific Coast General Office and Warehouse
 Los Angeles

CANADA

THE CANADIAN FAIRBANKS-MORSE Co., LTD.
 Branches in the Principal Canadian Cities

Ideal
Food Conveyor Systems
Found in Foremost Hospitals

hand, but the farmer was unwilling to have him bring his wife and baby to the farm. Mrs. S. was thus forced to live with her people who were in charge of a large rooming house.

The mother and baby soon became a disturbance because the baby cried constantly and annoyed the roomers. The mother could not hear the baby cry, so the grandparents had to assume much of the care at night. The financial problem became an additional worry. The husband was making no attempt to contribute toward the support of his family. The fact that the daughter had married against her parents' wishes and had brought about all these complications was a constant bone of contention. When matters at home finally became unbearable, the grandparents decided that the baby could be cared for at the Milwaukee Children's Hospital and that the mother could get a job in a factory and become self-supporting.

So thus it happened that one afternoon Mrs. S. and her father came to the clinic to ask the doctor to admit the baby to the hospital. Mrs. S. presented a pathetic figure, a pale young woman, slightly stooped, with bewildered frightened eyes and lines of suffering and worry on her face.

On examination, the doctor found the baby much underweight and hypertonic. The mother wrote on a piece of paper that the baby vomited his food, nothing seemed to agree with him. The doctor did not advise hospitalization but did advise a new feeding formula and explained that a worker would call at the home to give instructions in the care of the baby.

The German grandfather who had understood little of the clinic procedure was greatly displeased with the doctor's plan. He argued in broken English that the baby was sick and needed hospital care. What was the hospital for if it wasn't a place for sick babies? Mrs. S., unable to hear what was being said, was greatly confused and was in tears when she left the hospital with her father.

How the Follow-Up Nurse Helped

It was apparent that a visitor must get in touch with this situation immediately. The social service exchange informed us that the rehabilitation bureau for the handicapped was the only agency that knew the family. After a conference with the rehabilitation worker it was arranged that the follow-up nurse from the hospital clinic look after the baby. The visitor from the bureau would try to adjust the social situation that existed in the family.

The nurse from the hospital could accomplish little on her first visit. She tried to explain the preparation of the formula to Mrs. S. The pro-

cedure was written out on paper and was then demonstrated step by step, but the attitude of the grandparents was so hostile that concentration on the preparation of the formula was almost impossible. They declared their resentment toward the hospital in no uncertain terms. They complained about the inconvenience of keeping their daughter and baby in their home and expressed great contempt for the son-in-law, who was "too dumb to have around." To have attempted to argue or reason at this time would have been folly. There was only a faint glimmer of encouragement on this visit. When the nurse was preparing to leave Mrs. S. wrote her this message: "I love my baby and I want to keep him. You will help me, won't you?" To use the worker's own words, "But for this, the case looked hopeless."

Adjusting the Situation

In due time the worker from the rehabilitation bureau was able to arrange for the employer of Mr. S. to send a portion of his monthly wage to Mrs. S. for her maintenance. When this was accomplished and the baby responded to his new formula, the skies began to clear. As the baby became less fretful Mrs. S. gained confidence in herself. She responded aptly to the teachings of the nurse who convinced both the mother and the grandparents that the baby would not be a disturbing factor if he received the right care.

At the time this paper was written, the grandparents were showing commendable interest in the baby's welfare. An apartment away from the roomers' quarters has been given the mother and baby. The grandmother has acknowledged that she likes to do things for her grandson and seems pleased over his progress. While the grandparents have evinced no change in attitude toward the son-in-law and at every opportunity denounce him as worthless, their feeling toward the daughter and baby has shown a decided change.

Many another instance could be cited where the intensive work of the follow-up nurse has helped make it possible for the baby to remain in his natural environment—the home. This ideal of our pediatricians offers out-patient workers a stimulating challenge to play their part in this drama of infant welfare. If the babies could express themselves they too would plead for their homes and their mothers, as did so naively a little four-year-old when he was returning to the clinic following his discharge from the hospital. He feared that his mother might leave him in the hospital as she had done before, so he said in a most persuasive tone, "Don't leave me here, mother. Give some other kid a chance."

Q U I E T . . . please . . .



PATIENTS whose nerves are already on edge should not be handicapped in their battle for health by the noise of voices, clattering dishes, and loud footsteps echoing through hard-surfaced corridors. A quiet atmosphere hastens convalescence—allows patients to relax and enjoy the mental ease upon which recovery depends. And quiet surroundings add to the efficiency of your staff.

Acoustex effectively absorbs disturbing noise in corridors, wards, and private rooms of many prominent hospitals. And Acoustex is attractive as well as efficient. Acoustex rests the eye as well as the ear.

Acoustex is also successfully used for quieting diet kitchens, laboratories, laundries, nurseries, staff dining-rooms—for improving hearing conditions in classrooms and lecture halls. Mail the coupon for our interesting bulletin.

HOUSING COMPANY, *Acoustical Division*
40 CENTRAL STREET, BOSTON, MASSACHUSETTS
New York Office: 60 East 42nd Street

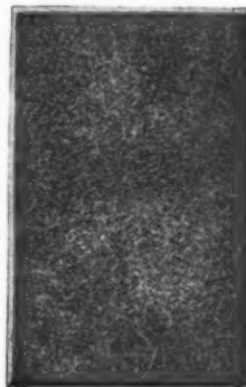
ACOUSTEX

The *Decorative* Sound Absorbent

Acoustex is sanitary, hygienic, and easily cleaned. It is incombustible (an important consideration in fireproof buildings). Furnished pretinted to your specifications, Acoustex is easily redecorated by spray painting. It is efficient, attractive, and permanent.

Mail the coupon for our special bulletin which describes acoustical treatment for hospitals. It contains photographs of Acoustex installations and gives further information about this modern, decorative sound absorbent.

Visitors to hospitals quieted with Acoustex are impressed with the restful and efficient atmosphere. And the sounds of their voices and footsteps do not disturb patients.



Acoustex tiles have an attractive textured surface that is easily cleaned. They are quickly put in place by experienced erectors.

HOUSING COMPANY, *Acoustical Division* H-3
40 Central Street, Boston, Mass.
Please send your new bulletin describing acoustical treatment for hospitals.
Name of Hospital.....
Address.....Street
City.....State
Attention of.....

What Cook County Offers in Graduate Instruction

By LILLIAN BISCHOSS, R.N.

Instructor and Supervisor in Medical Nursing, Cook County School of Nursing, Chicago

IN THIS paper, I shall describe some of the many benefits that I have derived from a six months' graduate course of study in the theory and practice of nursing at the Cook County School of Nursing and in the wards of the Cook County Hospital, Chicago.

Among the courses given during this six months' period of study was one in ward administration, which included class discussions and practical papers on the organization and administration of a hospital ward. The primary aims of the course were to emphasize the importance of the comfort and care of the patient and to point out the importance of the ward as a laboratory for the teaching of the student nurse. Such questions as the place of the head nurse in the proper functioning of a unit of a private institution or the wards of a public hospital were dealt with in detail. Topics such as the following were assigned to various members of the class: a detailed plan of daily routine as a fundamental basis for the care of the patient; the written procedure—its value to the student nurse, the graduate, the patient and the medical staff; the method of computing a time study of various vital activities of the nursing service for comparative values; the assignment of the personnel of the ward. The functional and case assignment methods, as they might fit the needs of the various types of hospitals, were thoroughly discussed.

Studying While on the Job

Staff education was an invaluable chapter in this course. This brings to mind a quotation from Gladys Sellev, assistant to the dean, Cook County School of Nursing: "If the time ever comes when it is possible for the organizations who employ many nurses, or for endowed institutions for the teaching of nursing, to assume the responsibility of educating the graduate nurse while she is working on the job, for the purpose of elevating the general level of nursing, staff education will approach our ideal of postgraduate education." I

might add also that it will keep the nurse in such a frame of mind that after taking postgraduate work she will not be satisfied to stop, but will seek a still higher education, by continuing to study while on the job or saving funds for a year or for the necessary number of years in order that she may complete her university work, the better to prepare herself for the future of nursing education. It is my belief, based upon observation and experience, that the persons who study while on the job are happier, are far better nurses, and are, I believe, less transient, than those who do not have this interest.

- Another feature of such a course is that it gives to the head nurse an understanding of her relation to the student as a medium between theory and practice, a feature which seems impractical to many but which, with properly trained persons, is a practical method of teaching student nurses.

Hospital Administration Taught

The course in hospital administration given by Dr. Malcolm T. McEachern, associate director, American College of Surgeons, Chicago, and other hospital specialists was also of great value. This course was offered to head nurses, supervisors and qualified general duty nurses, that is, those who had had some executive experience in other hospitals in Chicago. The content of this course had to do with such problems as staff management, hospital organization, the functions of the various departments of the hospital, the school of nursing and their relation to each other.

A course in problems in schools of nursing was given by Laura R. Logan, dean of the nursing school and Katherine Densford, one of her assistants. In this class, "Nurses, Patients and Pocket-books" was used as the main textbook. This course offered an opportunity for free discussion of present day problems as well as practice in parliamentary speech.

Basic courses correlating with the services I selected for my cooperative practice were: prin-



Bringing the Hospital Into the Home

QUITE properly the service of the hospital extends beyond the mere pronouncement of effected cure. Convalescence brings the after-treatment where the necessary future safeguards to health are impressed. And the patient, home again, retains in memory the health standards which have contributed to his cure.

The routine use of "Phillips' Milk of Magnesia" can also be continued in the home. Its agreeable taste and inviting appearance readily appeal to the patient. It functions to advantage when the natural factors of neutralization

have been handicapped or weakened. Thus it follows convalescence and is of inestimable value in counteracting hyperacidity without distension or gastric irritation—and restoring the patient to a natural well-being.

"Phillips' Milk of Magnesia" neutralizes about three times as much acid as a saturated solution of sodium bicarbonate and nearly fifty times as much as lime water. Further, it has the added merit of being a laxative, a quality of importance since the usual frequency of constipation in convalescence is often the underlying cause of acidosis.

Hospitals are advised to insist upon "Phillips' Milk of Magnesia" which has carried our registered trade mark for over fifty years. Obtainable from druggists and supply houses everywhere in 4-ounce (25c bottles), 12-ounce (50c bottles) and 3-pint hospital size.

PHILLIPS'

Milk of Magnesia

THE CHAS. H. PHILLIPS CHEMICAL CO. . . . NEW YORK

ciples of pediatrics, principles of pediatric nursing, principles of communicable diseases, principles of communicable disease nursing, principles of medicine and principles of medical nursing. The same courses were offered in the regular curriculum of the three-year student, but they aided me greatly in subjects in which I had become "rusty" and gave me as well a perfect correlation of theory and practice.

During the first part of my course, three months were spent doing bedside nursing in the pediatric department. I decided to do my cooperative practice in the pediatric department because that was my most neglected service in my own school. Later on I spent some time in the offices of the school of nursing where I had the opportunity of observing and helping with the admission and registration of new students. While in this service, I learned the principles of making a class schedule and helped with the assignment of students, which involved the rotating of the student body on the various services.

I spent some time with the registrar where I learned the method of keeping nursing school records and preparing instructor's reports. One week was spent with various instructors preparing laboratory work for classes and observing methods of teaching.

Further correlation was obtained in the social service department, which gave me a little experience and a large outlook into a field that I believe will offer a new opening for well trained nurses in the future. This is a field closely related to medicine, wherein we find persons endeavoring to advise and care for patients who are not themselves trained to recognize objective symptoms. To me this seems to be an opportunity for the specially educated and trained nurse. If I had never had the opportunity of receiving instruction in this well organized department, this fact would perhaps never have presented itself so distinctly.

Correlating Theory and Practice

As a finishing bit of practice, I served on a ward as assistant to the head nurse, where my work was personally supervised by Miss Sellew. If a postgraduate student was at all capable, she was there given opportunity to demonstrate her ability. There are graduate nurses on floor duty in this ward, so that the patient receives the best of care. I was allowed to correlate the theory given in the course on ward administration with the actual running and supervision of the ward by assigning the personnel of the ward according to the needs of the ward; checking written procedures to see that the technique was followed closely; requisitioning supplies; caring for linen; making surgi-

cal supplies, and offering any suggestions which I thought might improve the efficiency of the ward and which, after proper discussion, were tried and adopted if found valuable.

The postgraduate student is given every opportunity for development that presents itself in the institution. For instance, the instructor of advanced medical nursing resigned, and I was asked to take her position. I was transferred as understudy to the instructor who had agreed to remain three months longer. During this time I attended her classes, the preliminary practical nursing classes, and followed the students on the wards in return demonstrations and practical instruction.

I have completed one quarter of work as advanced medical nursing instructor at the Cook County School of Nursing, and Miss Logan has allowed me to take work in education at the University of Chicago, which I hope to continue. There are several other students from my class who were chosen for excellent positions.

How Illinois Handles the Problem of Nonresident Mental Patients

A saving of Illinois state funds totaling \$1,203,000 in ten years will result from the transfer, during the past year, of 401 patients from state hospitals for the mentally afflicted to institutions in the states of which they are legal residents, according to Mary L. Silvis, assistant director, department of public welfare for Illinois.

This computation, considered as conservative by officials of the state department of public welfare, is based on the average annual cost of caring for mental cases—\$300, for ten years, the estimated average time the patients spend in Illinois state hospitals, multiplied by the number removed during the year—401.

Of the 401 sent out of Illinois, the state was required to defray transportation costs of only 119. The others were removed at the expense of the government and of the patients' relatives and friends. The average cost of moving the patients was \$130, less than half the average amount expended annually for their care and maintenance in the institutions.

Through reciprocal agreements between Illinois and three other prominent states, New York, Massachusetts and California, and negotiations with others, the 401 removed from Illinois are now receiving the attention of the states in which they rightfully belong. From other states, 108 patients, pronounced legal citizens of Illinois, have been accepted by Illinois institutions.

OTIS

HOSPITAL ELEVATORS

IN HOSPITALS, more than anywhere else, there is a premium placed upon scientific research, correct design, precise manufacture, accurate installation, and unfailing service, of elevators.

Any interruption of elevator service, no matter how slight, might have serious consequences.

Otis Elevators provide the finest service of all types with utmost reliability.

Otis Micro-Leveling automatically provides level landings under all conditions, thus facilitating handling of stretchers and food trays.

Otis Automatic Collective Control provides service without operators.

Otis Dumbwaiters are available with several forms of automatic control.

Otis Cars are available in special designs for hospital service.

Otis Door Closers and Door Operating Devices speed up service.

Otis Maintenance takes entire care of the installation.

OTIS ELEVATOR COMPANY

Offices Throughout the World

DIETETICS AND INSTITUTIONAL FOOD SERVICE

Conducted by ANNA E. BOLLER, Central Free Dispensary at Rush Medical College, Chicago

Gypsyng With a Veterans' Hospital Dietitian

By LUCY GUARD

Iowa State College, Ames, Iowa

THE United States Veterans' Bureau employs about 150 dietitians in its hospitals in various sections of the country. I have had eight years' experience as one of these dietitians, and it is of some phases of this work that I shall speak in this article.

Although generalizations are dangerous, because there are so many factors that can shade the meaning one way or another, my observation is that life in an institution means both working with and playing within the institutional family. Whether or not we wish it, we find ourselves isolated from many outside contacts, and our social horizon largely limited by the gates of the institution. I advise anyone entering institutional life to cultivate and retain as many outside interests and acquaintances as possible. Of course there is a fascination about being closely associated with so many different persons, but it is not well to narrow one's field of acquaintances and interests too much. After all, the world is big, and full of many persons who are doing interesting things. Why not know about them?

The Changing of a Dietitian's Idea

I entered the service as staff dietitian at Fort Thomas, Ky., a contract hospital that has since been returned to its former owners. The building, which had been used as a fashionable resort hotel, was southeast of Cincinnati on a high cliff above the Ohio River.

I had been graduated six months. My major

had been foods and nutrition. I was imbued with the idea that everybody should have a pint of milk a day, and that a quart was better; that everyone should eat many leafy vegetables, and little meat; not so much pie and cake, but soft puddings instead. Can you imagine the criticism that I received from those big active men who expected plenty of "good, strong victuals"? Their food habits—likes and dislikes—had been definitely established. I expected them to eat head lettuce and cabbage; they expected to eat meat and potatoes. They intended to get what they wanted to eat; and, what's more, they did! I hoped to serve them fluffy omelet and orange juice for breakfast. They wanted griddle cakes and fried eggs "over hard," and they got them!

It took me quite a while to realize that I could not make their appetites over, and that it was necessary for me to adapt my menus to their wants; that, after all, a person enjoys the food he knows, and looks with keen suspicion upon a new dish. This, combined with a slight feeling of ridicule for this "newfangled dietetics stuff," makes anything but a happy situation for a green but idealistic dietitian to face. It was a much easier life for all of us when I learned to compromise my nutrition studies with their appetites.

Some problems not solved in the textbook confronted me up there. I remember that the government had taken over the equipment as well as the building. Included in this equipment were more than a dozen silver teapots with an inven-

With an eye to Economy—

Famous hospitals select Gorham

"5-in-1" Bowl

*To serve half orange,
fruit, melon.*



*To serve hot cereals or
broth*



To serve fruit juices



HOSPITALS everywhere are learning the economy of the Gorham combination bowl. In addition to cutting down the number of silver items which a hospital must buy to take care of fruits, fruit juices, cereals, eggs, bouillons, soups, ice creams, and ices—this combination bowl helps cut down the space for storing such items.

A glance at the illustrations on this page will give you an idea of the multiplicity of uses to which this "5-in-1" bowl may be put.

This combination bowl is made of Gorham's heavy plate. Its economy and convenience have made it indispensable to some of the finest hospitals in the country. Below is a partial list of those where the bowl is now being used.

No soft metal or soft solder is used in the construction of Gorham hospital silverware.

BENNINGTON, VT.
Henry W. Putnam Memorial Hospital
BERKELEY, CALIF.
Alta Bates Hospital
BETHLEHEM, PA.
St. Luke's Hospital
CINCINNATI, OHIO
Holmes Memorial Hospital
ELMIRA, NEW YORK
Arnot-Ogden Memorial Hospital
GLENDALE, CALIF.
Glendale Sanitarium and Hospital

GREAT FALLS, MONTANA
Columbus Hospital
Deaconess Hospital
HONOLULU, HAWAII
Kapiolani Maternity Home
Queens Hospital
LOS ANGELES, CALIF.
California Lutheran Hospital
Kaspar Cohn Hospital
St. Vincent's Hospital
MORRISTOWN, N. J.
All Souls Hospital

NEW YORK CITY
Columbia-Presbyterian Medical
Center
Harkness Pavilion
Sloane's Hospital
TOLEDO, OHIO
Maternity and Child ren's Hospital
ORANGE, CALIF.
St. Joseph's Hospital
PATERSON, N. J.
St. Joseph's Hospital
PITTSBURGH, PA.
Allegheny General Hospital
St. Francis Hospital
St. Margaret Memorial Hospital
PORTLAND, OREGON
Dr. R. C. Coffee Clinic & Hospital
Portland Surgical Hospital
St. Vincent's Hospital

SACRAMENTO, CALIF.
Mater Misericordiae Hospital
Sutter Hospital
SAN DIEGO, CALIF.
Mercy Hospital
SAN FRANCISCO, CALIF.
Children's Hospital
Morton Hospital
Mount Zion Hospital
St. Francis Hospital
St. Joseph's Hospital
SAN JOSE, CALIF.
San Jose Hospital
SANTA BARBARA, CALIF.
Santa Barbara Cottage Hospital
STOCKTON, CALIF.
St. Joseph's Hospital



*To serve hot or cold
bouillons or soups*



*To serve sea foods,
eggs, ice cream, ices*

THE GORHAM COMPANY

HOSPITAL AND HOTEL DIVISION

New York, 2 West 47th Street • Chicago, 10 South Wabash Avenue
San Francisco, 972 Mission Street

MEMORIAL TABLETS AND ENDOWMENT PLATES IN BRASS AND BRONZE.
WRITE OUR BRONZE DEPARTMENT Q FOR SUGGESTIONS AND ESTIMATES.

tory value of from \$6 to \$10 each. These had been used by the hotel for room service, and we used them on the trays sent to the bed patients. One cold winter night, in order to keep the drink hot while the trays were being carried to the third floor, I had the tray man put these teapots into the oven. When we were ready to pour the hot drink he opened the oven door. Imagine my surprise to find the floor covered with teapots and teapot handles that had fallen off. Other handles were just hanging by a thread. All these were mixed up with the hot dripping solder. I shall never forget that sight.

Food Habits Must Be Understood

After fifteen months I was transferred to Algiers, La., which is the part of New Orleans on the west side of the Mississippi River. I learned that New Orleans is about 125 miles from the mouth of the river, and that it is eight hours after the ocean liners leave the harbor before they reach the Gulf of Mexico.

There I learned that "sugah" peas means canned peas, and "yard" eggs means fresh eggs; tomatoes are something to put into the gravy and to scatter throughout most of the other cooking. Popular dishes to serve in that locality are shrimp à la Creole, crab gumbo, okra gumbo and any other kind of gumbo, and a rice-meat-tomato mixture called jambalaya. Coffee must be made by the French drip method. The berry is roasted until it is almost black, more or less chickory added, and the extract made so strong that it stains the cup.

Six months later I was sent to a large hospital for tuberculous patients at Alexandria, La., in the central part of the state. This whole country is colorful, with its green foliage and red soil. Last fall, seven years later, I was reminded in a very different way, of the color of that southern soil. The first day of school I was coming down the stairs of the dormitory and met a girl who had just come up to Iowa from down South. Her eyes were as big as saucers as she said, "Have you seen this country? Why, the land is BLACK!"

Louisiana is a distinctive state. Most of the natives in the southern part and as far north as the central part, are French; many are the mixture of Spanish and French blood known as Creoles. The 'Cajan French settlements through the Teche country are the result of the influx of the French people from Acadia when they were driven out by the English, the story of which is told in Longfellow's poem, "Evangeline." The people still talk French, and have retained many of their national characteristics. It is necessary for a dietitian to understand the distinctive pecu-

liarities of the people in the neighborhood, because she must use local help.

The delta section of Louisiana is low and swampy, and the water is dark and still. Occasionally there is an island or peninsula covered with high swamp grass. Scattered all about are cypress trees and live oaks, with tree moss hanging from their branches to the surface of the water. This moss festoons the branches and somewhat obscures the green foliage, so that the whole effect is a tangled mass of grayish brown. But, there are always two pictures, because the still water acts as a mirror. The trees are seen standing rightside up and upside down. Many bayous, from bank to bank, are filled with water lilies, and some of them with water hyacinths. These hyacinths cover the water with a soft green carpet, and, at the proper season, they burst into bloom, producing a mass effect of radiant blue-orchid and extending as far as the eye can see.

The hospital at Alexandria was an isolated hospital, and the social contacts for the women employees were largely limited to the help—the chauffeurs, the plumbers and the yard men—and to the patients. Influenced by these conditions, I became a Ford gypsy.

My next stop was at Jackson Park Hospital, Chicago, where I stayed six months. After that, for a short time, I was stationed at Edward Hines Jr. Hospital, Maywood, Ill. This hospital is a straight building, about one-half mile long, four stories high, with the general arrangement of rooms along the outside windows and the central corridor between the rooms. There were, at that time, about 1,200 patients although now the number is much larger. I was one of eleven dietitians on duty, and worked in two of the special diet kitchens: one where the soft, liquid and colitis diets were prepared; the other where the diabetic diets were weighed and prepared.

Where Menu Planning Is a Joy

After six months, I was transferred to Boise, Idaho, where I stayed three years. Boise has an altitude of 2,500 feet, and is on the plateau between the ranges of the Rocky Mountains. The land has great potential fertility, and when water is supplied it is very productive. Arrowrock Dam, twenty miles up in the mountains, supplies the water for the farmers' needs. There are many fruit orchards, and may I add, many deserted ranches. These had been opened up about the time the irrigation project was put in, and some had failed because of the high cost of marketing, or other economic factors.

Menu planning was a joy. We were able to have the best food at the lowest price of any place

Count on a fixed cost for every portion

*When you serve Libby's new
Pineapple—the finest ever grown!*

Its soothing, healing, purifying effects make pineapple exceptionally valuable for hospital diets.

Indeed, authorities agree that few fruits are as entirely beneficial to the system as this one.

It has its full properties only when it's been matured on the plant, and packed at perfect ripeness—to preserve the mineral salts, fruit sugar, the vitamins A, B and C.

Now we offer you the finest pineapple ever grown—the new crop from our own Hawaiian plantations—packed within a few hours after cutting.

Full ripe, selected fruit, it has all the healthfulness, with an entirely new, finer pineapple flavor!

And every can of it, in the three styles (Sliced, Crushed, Tidbits) is so perfectly uniform in pack and quality that you can count on a fixed cost for every portion.

Buy Libby's new Pineapple now, in any of the six convenient sizes.

Serve it frequently for salads, puddings, cakes, with meats, or alone just as it comes from the can.

Order today from your usual source of supply. Libby's Hawaiian Pineapple will be an economical as well as a healthful treat for your patients!

Libby, McNeill & Libby—Chicago



*Libby's Pineapple
de Luxe Salad*

To Libby's Pineapple Tidbits, add finely cut celery and chopped, freshly blanched almonds. Place on crisp lettuce, using mayonnaise mixed with whipped cream. Top with mayonnaise garnished with strips of pimiento. Serve well chilled.

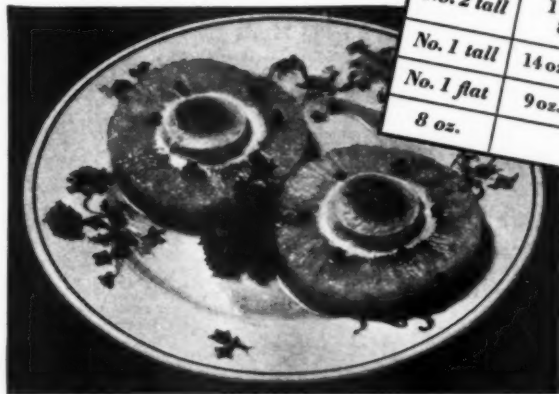


St. Patrick's Salad

Mix cream cheese with green coloring. Spread on Libby's Sliced Pineapple, using two slices for each serving. Press grape halves into cheese. Serve on lettuce with boiled dressing, using pineapple juice. Fold in whipped cream, before serving. Garnish with bits of green pepper.

To serve with chicken

Cook Libby's Sliced Pineapple in own juice. Add a small amount of brown sugar, whole cloves and stick cinnamon. Continue cooking 'til very tender. Remove to buttered pan. Place a marshmallow on each slice. Brown. Serve warm.



6 different sizes for every hospital service			
SIZE CAN	SLICED	TIDBITS	CRUSHED
No. 10	6 lb. 10 oz. 29 #2½ slices, or 40 #2 slices, or 50 #2 thinner slices	6 lb. 10 oz.	6 lb. 10 oz.
No. 2½ tall	1 lb. 14 oz. 8 slices	1 lb. 14 oz.	1 lb. 14 oz.
No. 2 tall	1 lb. 4 oz. 8 slices	1 lb. 4 oz.	1 lb. 4 oz.
No. 1 tall	14 oz. 8 slices	14 oz.	14 oz.
No. 1 flat	9 oz. 4 slices	9 oz.	9 oz.
8 oz.		8 oz.	8 oz.



I have ever worked. There were many gardens along the Boise River, and it was necessary for the farmers to market the crop locally, unless they raised enough to ship by the carload. We bought ungraded and bulk stock of excellent quality, and returned the containers to the growers. I remember the fresh plums, all kinds of apples, the strawberries in October, the Bing cherries, the fresh Royal Annes, the cantaloupes and the honeydew melons. These fresh fruits and vegetables were field ripened, brought to the hospital and served before they lost any of their delightful, natural flavors. It's fun to be a dietitian in such a country.

For recreation we often rode horseback up in the mountains. I remember seeing deer, mountain goat and mountain sheep. I have been up along the Salmon River when the salmon run was on. The female fish had made the trip from that, her birthplace, to the Pacific Ocean and back again. All this in order to lay her eggs in the shallow mountain stream where she had been hatched. Then after these eggs hatch, the little fish stay up there in those protected streams until they are big enough to make the trip down the smaller rivers, into the Columbia, and out to the ocean. Upon their maturity, they return to these same mountain streams and so complete the cycle. In that beautiful country are Yellowstone Park, Glacier Park, the Columbia River Highway and the Tetons. Vacations there do not come often enough.

Serving in the Desert

Then I was transferred to Fort Bayard, N. M. It is out West, too; but, it took two nights and one day for me to get there on the train from Boise. Fort Bayard is a government reservation out on the desert. The altitude is about 6,500 feet, and the reservation settlement is the town.

Practically all the supplies were brought in from the distant markets of El Paso, Denver and San Francisco, and it was necessary to plan menus two weeks in advance. A refrigerator car was sent up from El Paso, 150 miles across the desert, twice a week. We had our own dairy, which was a joy, until the time the cows ate wild gourds; the characteristic flavor of the gourds was carried in the milk for days.

For recreation we rode cow ponies up in the mountains, and went "Indian Diggin'." The whole country is filled with Indian relics. "Indian Diggin'" consisted in leaving early in the morning, riding from five to twenty miles to a spot which was supposed to be a hiding place to dig for Indian relics. When we were fortunate, we found arrowheads, and pieces of pottery with the char-

acteristic tribal markings. Sometimes, we found nothing, but carried back with us the memories of steak cooked over an open camp fire, and of a horseback ride through the mountains.

This hospital is for tuberculous patients. Many of the patients, since they expected to stay at least six months, brought their wives with them. It was necessary, for several reasons, to employ some of these women as waitresses, and somehow each one of them managed to serve the table at which her husband ate. Imagine some of the problems such an arrangement produced. So I was happy when I was transferred to the hospital at Gulfport, Miss.

A Region of Contrasts

This region is generally known as the Riviera of America. A boulevard extends from the Louisiana boundary, along the Mississippi coast, east beyond Mobile, Ala., to Pensacola, Fla. It is a region of contrasts; a resort section on one hand, with exclusive hotels and expensive golf courses, and on the other hand, the squalid poverty of the shrimp and oyster shuckers and poor whites; on one side the homes of the wealthy with roses blooming twelve months of the year, and on the other side, the unplastered, unpainted homes of the poor.

Yet it is an interesting country! Cape jasmine bushes grow four feet high, and are covered with those great, white, waxy flowers that are known as gardenias. Oleander hedges and oleander trees grow in profusion. Confederate jasmine vines grow to the tops of telephone poles, and have a delicate white flower whose sweet, distinctive odor carries for miles. There are arbors of wistaria that cover whole yards, and lovely japonicas blooming in February, a single bush worth \$100. Pine trees grow right along the edge of the Gulf of Mexico, and a live oak tree is green all winter, the young leaves replacing the old bronze ones which they push off in the springtime.

And the Gulf of Mexico is fascinating. Its color changes with the time of day, and with the season of the year. The color passes through all shades of blue; then sometimes it is green, and again it is gray. The horizon line moves in and out.

The gulf has a commercial aspect, too. One can see the oyster schooners and shrimp schooners, sometimes with colored sails, coming in with their catch during the open season. Freighters come into port to carry pine lumber to Europe and South America.

The hospital there is a 450-bed neuropsychiatric unit, where the dietetic problem is mainly one of supplying the hungry men with as much food as they need, at the same time maintaining

Nathan Straus & Sons, INC.

Walter J. Buzzini, Inc.—Kitchen Equipment Division

Why did the Lenox Hill Hospital and the Kings County Hospital place the contracts for equipment of the kitchens in their new buildings with Nathan Straus & Sons?

The answer is: Better service; lower prices.

Why were the complete furnishing and equipment contracts for the Doctors' Hospital, New York City and the Cornwall Hospital, Cornwall, N. Y., awarded to Nathan Straus & Sons?

The answer is: Better service; lower prices.

Why do more hospitals buy their regular replacements of china, glass, silver and utensils from Nathan Straus & Sons than from any other supply house in New York?

The answer is: Better service; lower prices.

Nathan Straus & Sons, INC.

66 West 23rd Street, New York

Telephone: Gramercy 5-4700

reasonable food cost. The Negro help along the Gulf Coast presents a queer mixture of the traditions of the Old South combined with a certain "smart-Alecky-ness" acquired at the resorts. Shortly after I went there, I often found it necessary in order to demonstrate how the finished product should appear, to do the work myself. But not for long, because as soon as the colored boys caught on, one of them would drop his work and come over to take my place. A lady should never work!

The life there also had its lighter side. One day Harvey, one of the colored boys, came into the office and requested a certain day off duty one month in advance. I said, "Harvey, are you going to get married?" He said, "Yes-um." And after a short pause, "But if she don't do right, Ah quits."

And John. I found him all dressed up and eating his breakfast on his day off duty. I said, "Why, didn't you go home last night?" "Home? This is home." I said, "But, I thought you were married." "Married? No-um. Ah spends my own pay check."

Analyzing the Work

After I had been at Gulfport for almost two years, I decided to answer an old urge to come back to college. Now, I am back in school, going to lectures and writing up "lab" notes. My years as dietitian in the United States Veterans' Bureau were interesting; my promotions came along in good order; the different environments were vastly interesting. After all, a chief dietitian's job in the government service means regular pay, security and a high ranking social position among the hospital group.

Just what does an administrative dietitian in such a position do? We grant that a foods and nutrition major is the key with which she opens the door to the institutional kitchen. But, when she gets inside, what does she find?

She finds that, as a foods and nutrition expert, she plans menus for all regular diets, considers food values, food combinations and anticipates the problems of food preparation and food service. She plans all the special diets prescribed by the doctors, and in order to do this, she must be skilled in diet therapy. Thus far, her foods and nutrition training will carry her, but there are other essentials.

She must order her supplies, either direct from the business houses or on requisition to the purchasing agent, who obtains the supplies for her. She must understand all the problems connected with procuring meat, fruits, vegetables, fresh, canned and dried, fish, poultry, milk and milk

products, eggs and staple groceries. Before placing an order she must consider price, both local and at the nearest available large market, grades, varieties, seasons, relative cost per serving and possible substitutes for both food value and cost. She must consider the likelihood of prompt delivery, and the business reliability of the firms in the community.

She must be a technical engineer. She needs to understand the maintenance and operation of the equipment. She must be able to plan an efficient arrangement for new units, or the rearrangement of the old. She should know blue prints, and she should be able to draw plans to scale. She must certainly must understand refrigeration, steam tables, electric toasters, dishwashing machines, gas stoves, oil ranges and mixing machines with a three-shift gear as complicated in its mechanism as an automobile.

She must be a production engineer, able to apply economic principles to the manufacture of meals from raw food. She must organize her department and assign each employee to the proper job, so that both his ability and his time are best utilized. This, incidentally, means the adaptation of the menus to their time and their capacity. She must know the unit hours required to string beans and to shuck a mess of sugar corn, before these vegetables can be given a place on the menu. Sliced oranges have an entirely different food value from gelatin pudding, but the time required to peel and slice oranges must also be considered.

She must correlate the quantities purchased with the needs of the menu, so that there will be sufficient quantity of food on hand, but no waste. She must keep a critical eye on food control, and see that all the food brought into the storeroom is accounted for, both in the kitchens and in the dining rooms.

Keeping Track of the Pennies

The administrative dietitian must be a book-keeper and a cost accountant. She must keep a complete record of all purchases and issues of food supplies. These records are essential both for daily food costs and for requisitions for future supplies. She must analyze food costs, and see that the pennies, as well as the dollars, are accounted for. She must always keep her food costs within the allowances of the budget.

She must estimate the quantity of food needed a month in advance, a quarter in advance and a year in advance. When a farm is being operated, home grown products must be anticipated, and plans made for their use. In the South especially, she must consider the amount of canned supplies to be used in the summer, without having a sur-



As the Plans Are Drawn Three Ghostly Generals Ride

As the plans for any public or semi-public building, involving plumbing and plumbing fixtures, are drawn, three grim shadows mount ghostly steeds and figuratively start for the job.

They are: *Failure*, *Short Life* and their hideous brother in arms, *Insanitation*.

They lead unseen armies to attack any fault or flaw in design, construction, quality or fitting of the plumbing fixtures. Whether these three notorious generals and their commands reach the job you are planning or not depends upon what is written into the specifications.

For 52 years the Clow Soldier of Sanitation has been fighting and defeating this enemy.

To this end Clow has developed a line of specialized plumbing fixtures unrivalled anywhere in the world, designed particu-

larly to meet the acute needs of schools, hospitals, industrial plants and public buildings as well as dwellings.

And Clow goes to unmatched lengths in assuring that these fixtures will meet those needs. As a matter of fact, all fixture batteries are set up completely before shipment and tested under conditions simulating those of the actual installation.

Write such plumbing into your specifications and the three notorious generals and their ghostly hosts are routed before the plumbing fixtures are even installed.



No matter what your interest in plumbing may be don't hesitate to call in the Clow Soldier of Sanitation. Behind him stands the most complete line of specialized plumbing fixtures in the world. Or ask for the Clow Catalog covering the type of building you are interested in.

CLOW

CHICAGO

PREFERRED FOR EXACTING PLUMBING SINCE 1878

Consult your architect

plus on hand to spoil during the hot season.

She must be an intelligence officer, and grade the efficiency of her employees so that they are given every opportunity to utilize their abilities to the fullest extent and so maintain their interest. She must "size up" applicants for work, and decide whether or not they will fit into the organization. She must give directions clearly and concisely, so that there is no possibility for misinterpretation. She must give and take kindly criticism.

She must be a sanitary officer, to see that a high standard of cleanliness is maintained throughout the department. She must not forget the garbage house.

She must be a salesman for her department to all who eat in the institution—patients, doctors, nurses, employees and guests. She must study the localized food tastes of her patrons, and see that their favorite dishes are often served. She must be a critic of food flavors, and must not forget that the salt shaker is one of her best friends. She is the connecting link between this food factory and its patrons, and she must make good.

A Foundation on Which to Build

She must be the teacher for her employees, demonstrating and explaining the hows and the whys of their work. She must protect these same employees from outsiders, who think that because they work in the kitchen they are public servants.

She must cooperate with all departments of the institution, dovetailing her department with each one of them so that the whole unit functions smoothly.

My own observation is that the success of an administrative dietitian, whether she works in a hospital or in a commercial organization, depends upon her wise solution of the problems presented. To do this, she needs a wide background of both training and experience. She must have a knowledge of foods and nutrition. This includes the wise selection of food for health; food preparation from both the technical and scientific aspect; food chemistry; the fate of food in the body, and metabolism in general.

Business Judgment a Fundamental

Along with this, she needs those studies given in a course in institutional administration: large quantity cookery, marketing, equipment and organization. But, there are other phases of her work to be considered. When we realize that the food budget in any institution is the greatest single item of expense we see how necessary it is for the dietitian to be absolutely sure of her business judgment. It is much easier for her if she

acquires at least the rudiments of this training by formal education in school. It is a costly method, both to herself and to her employer, to obtain this business judgment by the trial and error method.

When the importance of all these things is considered, it is easy to understand the fascination of the dietitian's work.

Planning the Food Service Departments

What steps are necessary in the planning of food service departments? Vincent R. Bliss, Chicago, lists them as follows in the *Bulletin of the American Hospital Association*:

1. Determination of the general system of food service desired for the hospital.
2. Determination of how this system must be adjusted to meet individual conditions.
3. Determination of the size and apportionment of the food service space and the location of rooms in the building plan.
4. Actual planning of food service departments and the layout of the equipment.
5. Provision of auxiliary mechanical and structural features, including the food transportation system.
6. Formation of the equipment specifications.
7. Awarding of the equipment contract.
8. Installation of the equipment.

Why Edible Gelatin Is Useful in the Dietary

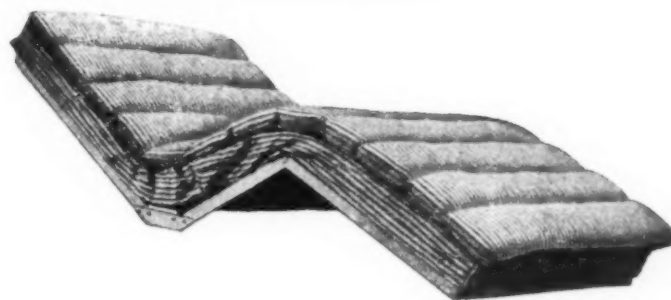
Edible gelatin is a hard, tasteless, odorless substance that is almost white when it is dry and that is transparent or translucent when it is in solution. Gelatin is a protein food of high nutritive value. It is extracted by heat from the bones, the white connective tissue and the skins of food animals.

The chief distinguishing characteristic of gelatin is its ability to form a jelly after it has been dissolved in hot water and allowed to stand. Other characteristics are: It is a colloid and, therefore, tends to prevent the growth of crystals in any medium in which it is present; it is an emulsifier and helps to hold in union two liquids that would otherwise separate; it aids in the digestion of other foods.

The chief uses of gelatin are in desserts, ice cream, marshmallows and jellied meats.



There is only One.



Privileged to be the most advanced mattress of today

It no longer need be argued that "Spring-Air" is the most advanced mattress of today. Hundreds of leading hospitals have established that fact through their adoption of this new sleep cushion. Never, to our knowledge, has any other mattress been recommended with so much authoritative backing.

One of the tributes to this leadership is the way others are endeavoring to copy Spring-Air. We neither resent nor condemn these efforts; any product worthy of success must inevitably have its imitations.

But we are surprised that those who seek to trade on Spring-Air's success should show so little regard for the integrity and intelligence of hospital authorities. They seem to overlook

the fact that an inferior imitation at its cheaper price smacks of quackery to the conscientious hospital buyer.

It has been learned through experience that what the hospital desires is perfection in all things. So it is that Spring-Air took unto itself the obligation of being the world's finest mattress. To make it the finest, the two Karrs—father and son—labored over forty years on the spring construction used in Spring-Air before it was good enough to be taken to the hospitals. Even then, it was several more years before Spring-Air reached its present perfection through the co-operative help of our hospital critics.

This noiseless, permanently locked, completely flexible, all-steel construction is patented. It cannot be duplicated.

But these patents are for protection only; they are not the reasons for Spring-Air's phenomenal increase in sales. It is not the diploma that makes the doctor. The weightiest factor of all is the integrity of the manufacturer, coupled with the ability and the technique to produce the finest. That's why the vital spring construction used in Spring-Air has the beauty and strength of perfection—why it can be conservatively guaranteed for twenty years.

On through to the final sewing on the Spring-Air label, the standards are so high that only 38 manufacturers among several thousand are qualified to be its makers. They are the Master Bedding Makers of America—and from them only can you buy the genuine Spring-Air. Based on their long experience with every form of mattress construction, they will tell you that the world's finest mattress is Spring-Air.

MASTER BEDDING MAKERS *of* AMERICA

Exclusive Makers of Spring-Air—Factories in 40 Principal Cities

Secretarial Office—Holland, Michigan

OUT-PATIENT SERVICE

Conducted by MICHAEL M. DAVIS, Ph.D.
Director for Medical Services, Julius Rosenwald Fund, Chicago

What 536 Chicago Families Spent for Illness

By MARGARET LOVELL PLUMLEY

Research Assistant, Julius Rosenwald Fund, Chicago

THE cost of medical care in recent years has become a problem that has aroused widespread interest and discussion among lay and professional groups. How much do families pay for the care of illness during the course of a year? What proportion of this goes to the hospital or to the clinic? What to the physician? How many of those who utilize clinics and the ward services of hospitals could afford to pay a private physician?

To ascertain the answers to questions like these and others equally pertinent, the committee on medical needs, Institute of Medicine of Chicago, during the summer of 1929 investigated the incomes, expenditures for illness and standards of living of a group of hospital and clinic patients and their families. Louise W. GilFillan, a social worker experienced in hospital social service and in investigation, was appointed field director. She selected the cases and under her direction a staff of trained workers made home visits.

An advisory committee on social and economic aspects was formed which included the head of the department of economics, University of Chicago, the head of the department of sociology, Northwestern University, the director of the school of social service administration, University of Chicago, a representative of the United Charities, the director of the Chicago Council of Social Agencies and the director for medical services, Julius Rosenwald Fund.

Records covering a year's expenditures—July 1, 1928, to June 30, 1929—of 536 patients taken

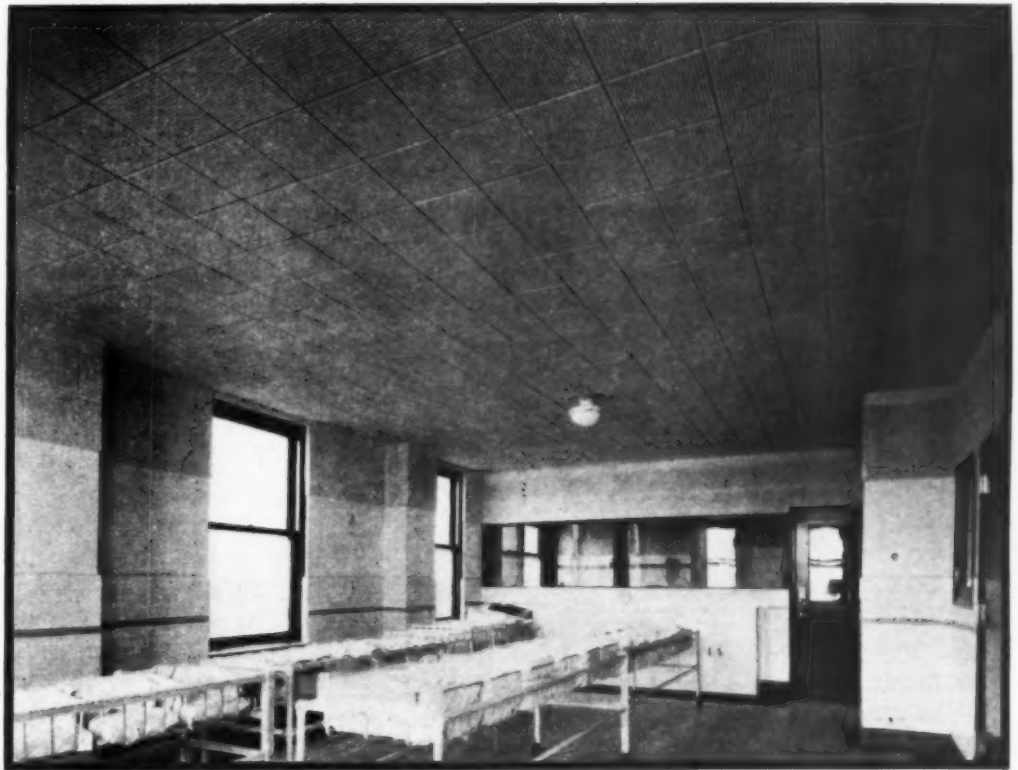
consecutively from six Chicago medical institutions form the basis of the study, and are believed to give a representative, though small, sampling of hospital and clinic patients in Chicago. The institutions included were: Presbyterian Hospital, St. Luke's, Michael Reese, the Clinics of the University of Chicago, Central Free Dispensary and the Northwestern University Medical Clinic.

More than a thousand records were chosen for initial examination. From these were excluded cases in which the patient lived outside of Chicago, or was an inmate of an institution, an employee of the hospital or clinic, a man living alone in a lodging house, a student away for the summer, a man suffering from venereal disease, and cases in which the patient had given conflicting addresses or in which the medical problem was of a minor nature involving but slight clinic contact. The 536 remaining records were those for which adequate data were obtained.

Families from every economic level were found. Since, however, there were more patients who had attended ordinary clinics and had utilized ward beds in hospitals than there were pay clinic and private room patients, the proportion of families in the lower economic levels predominated.

More than two-thirds of the families studied were found to have incomes of less than \$2,000 a year, while 19 per cent had less than \$1,000. For 20 per cent the annual income was between \$2,000 and \$3,000; for 13 per cent it was \$3,000 or more. Of the group who paid no fee to a physician (391

Vigorous young lungs try their best to create bedlam in the nurseries of St. Francis Hospital, Wichita, Kansas, but the Acousti-Celotex ceilings quickly absorb these sounds before they can travel to nearby rooms.



Two Dozen Lusty Lungs with but a single thought

TO MAKE more noise than your neighbor — that's the game in baby wards!

But wise superintendents apply Acousti-Celotex to the ceilings of these rooms, which subdues bedlam and prevents it from traveling throughout the hospital.

Acousti-Celotex is also used in corridors, diet kitchens, utility rooms, patients' rooms—wherever disturbing noise must be subdued.

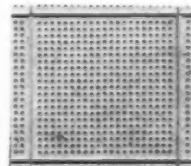
This remarkable material is making hospitals all over the country noise-proof. It quiets

the noise of street traffic, equipment, the tramp of busy feet.

Acousti-Celotex comes in single, finished units, durable and permanent, which are quickly installed in old or new buildings.

Its natural color is a pleasing buff, but it can be painted repeatedly with any kind of

Close-up of Acousti-Celotex tiles, showing decorative adaptability—and the deep perforations that permit repeated painting. Acousti-Celotex may be decorated before or after installing, and may be washed if painted with a washable paint.



paint without loss of sound-deadening value. Acousti-Celotex ceilings are easy to keep clean and sanitary.

Mail the coupon today for further information on this remarkable material.

The Celotex Company, 919 North Michigan Avenue, Chicago, Illinois. In Canada: Alexander Murray & Co., Ltd., Montreal. Sales distributors throughout the World. Sold and installed by Acousti-Celotex contracting engineers.

ACOUSTI-CELOTEX

FOR LESS NOISE—BETTER HEARING

The words Celotex and Acousti-Celotex (Reg. U. S. Pat. Off.) are the trademarks of, and indicate manufacture by The Celotex Company.

THE CELOTEX COMPANY, 919 N. Michigan Ave., Chicago, Illinois. M.H. 3-31

Send me information about noise control in hospitals.

Name.....

Address.....

City.....State.....

families), 74 per cent had annual incomes of less than \$2,000. The father was the sole support of almost half the families studied. In the group of 175 families with incomes exceeding \$2,000, ninety-nine families had two or more wage earners. The majority of families, it is believed, had little margin beyond the money required for necessities. Sixty-five per cent reported they had no bank savings.

How the Families Were Grouped

Families with four members comprised the largest single group. Those with two members made up the second largest group and those with five the third. More than half the patients were entirely dependent upon others for their support, as in the case of housewives, elderly people without occupation and children. A quarter were the chief wage earners for their families. Almost every type of occupation was represented, with the largest groups classified as laborers or skilled workers in the trades, and smaller groups as peddlers, clerks, professional people and other miscellaneous occupations. Nearly 40 per cent of the families were living in overcrowded quarters, that is, with two or more persons to one room.

For 472 families who could give figures of sufficient accuracy to tabulate, the expense of sickness during the year under study was nearly \$60,000. Nearly half of those reporting spent less than \$51; 26 per cent from \$51 to \$150; 17 per cent from \$151 to \$500; 5 per cent from \$500 to more than \$1,000. Twenty-eight families gave no expenditures for sickness, since they had been treated without any charge from a hospital or a clinic and had spent or at least reported nothing for drugs, car fare and other items.

Mary and Frank Jones and their family were among the group who, although their incomes were small in proportion to the size of their families, had fortunately been little troubled by sickness during the year. There were seven children in the Jones family. Tony, the eldest, was twelve. Frank made about \$35 a week. Their flat cost them \$45 a month. Their sickness expense had amounted to only \$20 during the year—\$10 for a tonsillectomy for six-year-old Clara, \$8 for the same operation for Lena, aged four, and \$2 for clinic visits. Mary was a little apprehensive when she talked to the visitor for fear the clinic would think she did not need clinic service, "merely because I was well dressed and the children looked well clothed and neat." Mary said she sewed and found bargains and made the children's clothing and in that way stretched their modest income as far as possible.

Not so fortunate were the Thompson family.

The father supported his wife and four small children on \$2,065 a year. Tom, the seven-year-old had had chronic empyema. His first illness, cared for in a private hospital early in the year, had cost his father \$321. A second attack kept him in the hospital 119 days and cost \$238. Sickness bills for that family amounted during the year of the study to over a quarter of its annual income. Mr. Thompson exhausted his savings and borrowed at the bank in order to take care of his medical bills.

It is significant that more than half the families studied had had private physicians for previous illness and more than a fifth for the current illness, either before or after they received hospital or clinic care, and that almost a third of the current expenditures for illness during the year was for the services of private physicians, although a large majority (77 per cent) did not pay a physician for care either at a hospital or at a clinic. The majority of the families who reported used current income to pay their bills for sickness; thirty-four paid the bills entirely out of savings, fourteen by borrowing. Nearly a fifth were in debt to the hospital, the physician or the dentist or had incurred debts for other medical expense during the year.

Comparing the expenditures of individual families with their resources and responsibilities, it was judged that nearly 20 per cent of the families for whom all the data were available spent more on medical care during the year than they could justly afford. Twenty-seven of the 157 hospital cases who had paid no physician's fee and 17 of the 59 private hospital cases belonged in this group. It is worth noting that of the 17, twelve were still in debt to the hospital or to the physician.

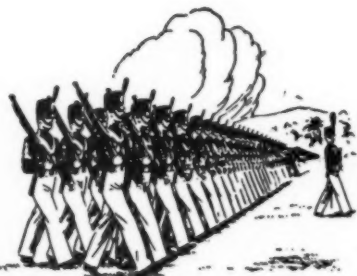
What Illness Cost Two Families

One such family was the Mathews. Mr. Mathews supported a wife and three children on an income of \$2,345. He had no other income or assets. He had paid out \$895 for hospital and physician's charges for the care of one of the children for osteomyelitis. The child spent four weeks as a private case at a cost of \$152 and two weeks in the ward at \$49. After that the hospital took care of him free of charge. Fees to physicians and to a special day and night nurse amounted to \$200 and \$416 respectively.

Forty-eight of the 266 clinic families whose income and sickness expenditures were known, were believed to have paid more than they could afford during the year for sickness expense. The Jacksons were of this type. They had suffered from the costs of both present and previous illness. The

COLT AUTOSAN

DISHWASHING MACHINES



THE COLT AUTOSAN LINE is most complete, providing for dishwashing service of exceptional efficiency for institutions ranging from the private hospital to the largest public hospitals.

There is a Colt Autosan type to meet all conditions and a model to fit both space and service requirements.

Any of the eight Colt Autosan Dishwashing Machine models will thoroughly clean all sorts of dishes, glass and silverware.

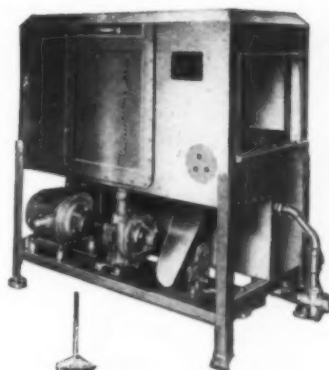
Each has those exclusive Colt Autosan features which insure consistent, year-after-year service at minimum labor and replacement cost.

SELECTED BY THE LITTLE COMPANY OF MARY HOSPITAL

WHICH, WHEN COMPLETED, WILL BE
ONE OF CHICAGO'S
MOST MODERN HOSPITALS

Model RA-1

Used in the Little Company of Mary Hospital is of the Automatic Rack type. Direct sprays, Colt-built centrifugal pump, heavy gauge Monel metal, large capacity, medium price, one of eight Colt Autosan models.



From a drawing by Architect
Joe W. McCarthy of the
buildings when completed.



Colt's Patent Fire Arms Mfg. Co.
Autosan Machine Division
Hartford, Conn.

Please send me your new folder entitled, "Cutting Dishwashing Costs." We feed.....persons per meal.

Name

Address

City.....State.....

64-73



COLT'S PATENT FIRE ARMS MFG. CO.
AUTOSAN MACHINE DIVISION
HARTFORD, CONN., U.S.A.

MAKERS OF FIRE ARMS, ELECTRICAL EQUIPMENT, MOULDED PLASTIC PRODUCTS, DISHWASHING AND METAL-CLEANING MACHINES.

family consisted of Mr. and Mrs. Jackson and their two-year-old child. Mrs. Jackson's mother was dependent on them for room and board during four months of the year. Earlier in the year the child had broken her leg. The expense of hospitalization at a private hospital had been \$70. Dental care for the mother had cost \$10 more.

Mr. Jackson had gone to the clinic for arthritis. His expense at the time of the study was divided as follows: clinic expense, \$39.50; transportation, \$4.80; other expense, \$4. Of the clinic expense, eight visits had cost \$6; x-ray, \$1; seven light treatments, \$17.50. Medicines had cost \$15. The worker had made this note on Mr. Jackson's schedule: "Went to clinic because he had practically no funds. Wanted to obtain services as cheaply as possible. Thought charges for registration and x-ray entirely out of his reach."

Few Able to Pay Higher Costs

In contrast to the considerable group who were believed to have paid more than they could afford, only a small number, less than 4 per cent of the group, might have been able to pay a physician's fee in addition to the hospital bill, or should have been able to employ the services of a private practitioner instead of the clinic, at least for a short time. It was judged that six hospital families, or 3 per cent of the 197 families whose incomes and expenditures were known, should have paid a professional fee in addition to the hospital bill. Of the 266 clinic families, it is judged that eight, or 3 per cent, should have sought the physician's services at his private office rather than at the clinic, while two more certainly could have paid a higher rate than they did and might have paid physicians' fees for a short time. If these two were included the rate would be almost 4 per cent.

The Black family, it was considered, should not have sought clinic care. Mr. Black had an annual salary of \$3,450. He had lost no time during the year. He paid \$785 for their apartment. Their savings amounted to about \$500. They had spent \$800 for furniture and contributed about \$156 to dependents during the year. The Black's total expenditure for illness that year was \$18.50. Mrs. Black had paid \$13.50 to a private physician for examination for pregnancy. She had also attended a clinic which advised her to engage a private physician for her confinement. His charge, she thought, would be about \$100. Mr. Black went to the clinic because he thought it would be a good place for a general examination. The diagnosis was "sensitive upper respiratory tract, no disease." This examination cost him \$5.

Ability to pay must be determined by taking into consideration all the circumstances that

affect each patient before a decision is reached. It would be impossible to formulate "cut and dried" standards that could be applied exactly to every patient who asks admission to a clinic or a hospital. In determining ability to pay, family resources must be compared with the obligations brought by illness. Incomes, size, constitution and standards of living for the family, the expense for previous illness and the probable expense of the present illness must all be considered. Family budget schedules are useful if employed in conjunction with the other factors involved.

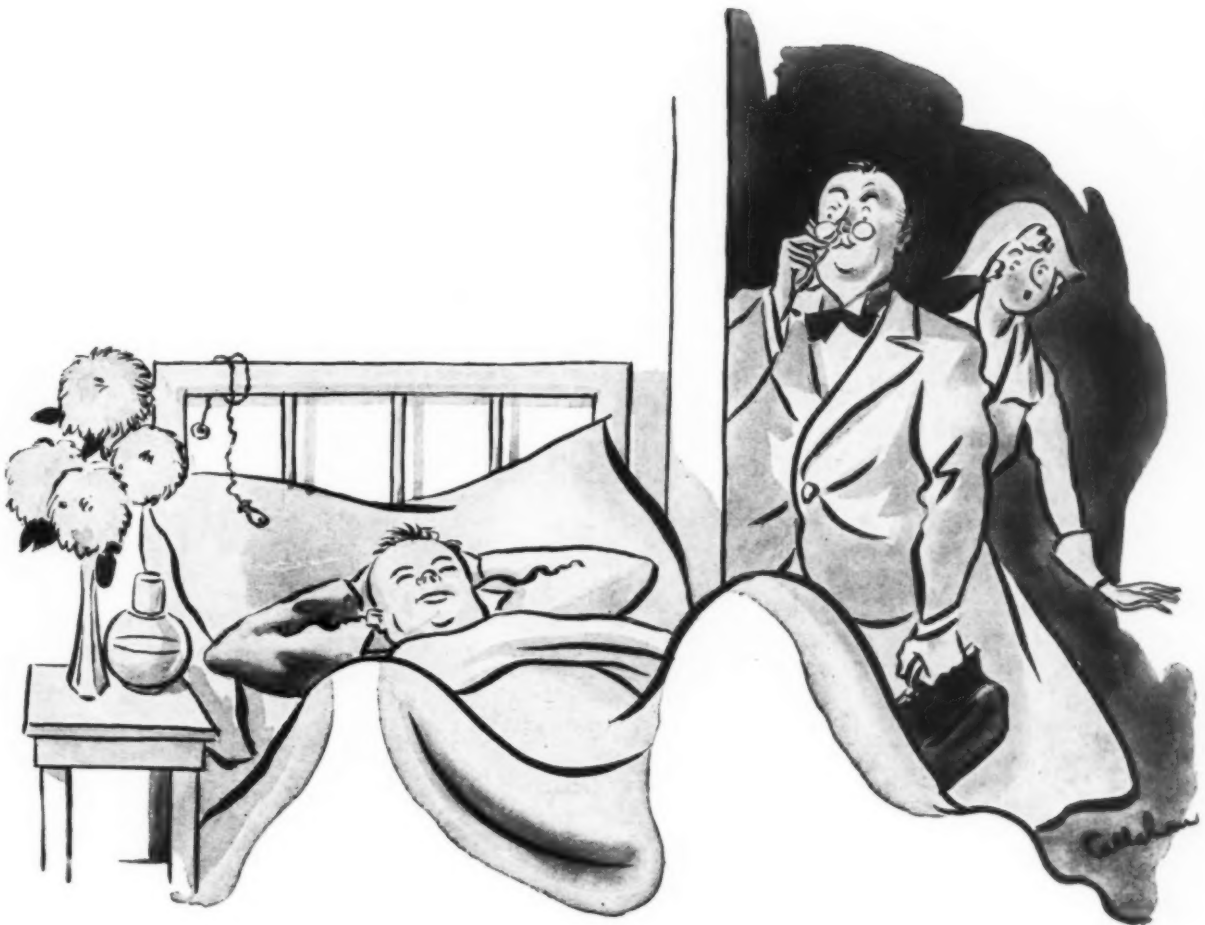
It would seem from this study that the patients who stint themselves beyond reason to pay the costs of medical care through physician, hospital and clinic, are five times as numerous as those who take advantage of free or part-pay service when they could meet a higher rate or the full cost. Many families, apparently, had employed a private physician as long as their resources held out, and sought the hospital or clinic only when these were exhausted. Much more significant than the small number of patients who might have paid for private office care, is the extent to which the group as a whole utilized private physicians and the amount of previous expense which many of them had been under before they reached the clinic.¹

The Function of a Women's Social Service Committee

In almost every hospital in which there is a social service department, a committee of women, serving under various designations, is particularly interested in this type of work and is valuable in encouraging staff workers.

Such a committee should possess largely advisory powers and little if any authority. The success of women's committees everywhere depends in a great measure upon a thorough understanding of this fact. In instances where friction has arisen this unfortunate occurrence can usually be traced to a misunderstanding of the prerogatives and powers of the members of groups of this sort. In many instances, a women's social service committee has been responsible for the inauguration of this valuable work. In some cases, the entire financial responsibility for the work of the department is placed upon a women's committee. Usually, a greater or lesser sum of money is placed at the disposal of the social service director by such an interested group.

¹This article is based on "The Ability to Pay for Medical Care," a report prepared under the auspices of the Institute of Medicine of Chicago and printed in the *Proceedings of the Institute*, December 15, 1930, January 15, 1931 and February 15, 1931. Reprints may be obtained from the Institute of Medicine, 637 South Wood Street, Chicago.



What's happened TO THE Convalescents?

THEY'RE REACTING strangely lately. So sweet and docile. Do you suppose something's wrong? What is it?

This is an exaggerated (but not *much* exaggerated) picture of a hospital that's just replaced its linens with Pequot Sheets and Pillow Cases.

How can *that* make such a difference?

Well—one of the convalescents' grouches is pure tactile sensation. Things *feel* rough to him. Now there is one make of sheets and pillow cases, which has always been noted among housewives for its *feel*. It is Pequot. The feel is *different*—softer, smoother. You can tell it with your own

fingertips. To a convalescent the difference is tremendous. The feel of a Pequot, to him, is sheer luxury. He relaxes, smiles.

And this soothing Pequot fabric, by a strange and fortunate circumstance, is noted for *wearing longer* than any other. With the original cost only slightly, if any, higher, this *extra* Pequot wear means considerable economy. And what hospital can ignore economy? All in all, you can richly afford to humor the convalescents with Pequot! Pequot Mills, Salem, Mass. Parker, Wilder & Co., selling agents, New York, Boston, Chicago, San Francisco.



THE MOST POPULAR SHEETS

AND PILLOW CASES IN AMERICA

NEWS OF THE MONTH

More Research Into Mental Ills Urged at Medical Congress

PSYCHIATRIC problems were given prominence on the opening day of the Annual Congress on Medical Education, Medical Licensure and Hospitals, held under the auspices of the American Medical Association at the Palmer House, Chicago, February 16 to 18.

Assembled for the meeting were between two and three hundred medical educators, physicians, surgeons and hospital administrators, the participating organizations being the council on medical education and hospitals of the American Medical Association, the Federation of State Medical Boards and the American Conference on Hospital Service.

How to Conserve Mental Health

Dr. Ray Lyman Wilbur, secretary of the interior, was the opening speaker. "The mental health of a nation is its greatest asset," he declared, "and mental hygiene is a vital part of preventive medicine." He suggested that five steps be taken to conserve health, outlining them as follows:

"Medical students and physicians should have more adequate training in psychiatry.

"There should be interns in every hospital for the care of the mentally ill. The presence of the inquiring student would do more to advance pathology and develop research in mental hospitals than any other factor.

"More of the research energy of the medical profession should be diverted into the fields of psychology and psychiatry.

"The public should be educated to view mental diseases as they do other diseases.

"The handling and care of the mentally ill should be dealt with along medical rather than legal lines."

Speakers who dealt with the care of the mentally ill from the standpoint of hospitals were Dr.

Samuel W. Hamilton, Bloomingdale Hospital, White Plains, N. Y., and Dr. J. Allen Jackson, Danville State Hospital, Danville, Pa.

Mental hospitals are the greatest medical enterprise of the state, since there are more beds in mental hospitals than in all others, but too often they are thought of as dumping grounds for undesirable patients, Doctor Hamilton said. He bespoke for state hospitals greater interest on the part of the general medical profession, and he deplored the political connections in which state institutions are sometimes involved. "Because the science of dealing with mental illness is as yet inadequately taught in medical schools, the hospital's first function is to bring a knowledge of psychiatry to the physicians of its community through meetings, clinics and consultation service," Doctor Hamilton said. He stressed especially the place of the hospital in the prevention of mental disease. Some hospitals meet this need by arranging clinics to which patients are referred by outside physicians for consultations, he said.

Community Clinics Centers for Mental Hygiene

How state mental hospitals, once known only as asylums of refuge for the hopelessly insane, may become centers for mental hygiene in their communities was shown in Doctor Jackson's address. A mental hospital in a rural area is better able to achieve such a position than an urban hospital, as its relation to the community is not complicated by other activities of the same type. In outlining the necessary equipment and personnel of a mental hospital, Doctor Jackson stressed the community service department, which he called absolutely essential. The function of this department is the sponsoring of community clinics and the enlightening of the public. Ten clinics established under this program at a Pennsylvania hospital in the past ten years have reg-



Malonic ester stills in which intermediates used in the manufacture of Amytal are made—Laboratories of Eli Lilly and Company, Indianapolis, Indiana.

[MANUFACTURERS OF]

ILETIN (INSULIN, LILLY), LIVER EXTRACT No. 343, PARA-THOR-MONE
AMYTAL, PULVULES SODIUM AMYTAL, EPHEDRINE PREPARATIONS

NEWS OF THE MONTH

istered more than 10,000 visitors, he said. Of these, 65 per cent were children under sixteen. On the educational side, this hospital sponsors lectures and newspaper articles on mental hygiene, publishes a bulletin and hands out mental hygiene literature to its visitors to carry the doctrine that mental illness can in an increasing degree be prevented.

On Tuesday afternoon one entire session of the congress was devoted to hospital problems. The chairman was Dr. L. A. Sexton, Hartford Hospital, Hartford, Conn., president of the American Hospital Association.

Dr. A. C. Bachmeyer, Cincinnati General Hospital, gave the opening address, speaking on the hospital, the medical college and the intern. The primary object of internship is to provide opportunities whereby recent graduates may obtain practical experience in the practice of medicine under proper supervision, he said. He urged the hospital to recognize its responsibility to the intern and stressed the importance of the attitude assumed toward him by the administrator and the medical staff, who should organize the intern service. The administrator should take the intern upon a tour through the hospital before he enters upon his service, should explain to him the general organization of the institution and should introduce him to the heads of departments, the speaker said. Proper living quarters, suitable food and recreational facilities should be ensured to interns. It is the part of the medical staff to provide the professional training, giving to the intern increasing responsibility as his ability develops. On the staff devolves also the grave responsibility of training the young doctor in medical ethics, Doctor Bachmeyer pointed out.

Hospital Problems Considered

The training of interns was further discussed in a paper by Dr. Harold L. Foss, Geisinger Memorial Hospital, Danville, Pa., in which it was stated that Pennsylvania was the first state to require the intern year, now mandatory in many states.

Cultists and the hospital's right to bar them was the topic discussed in detail by Thomas V. McDavitt, bureau of legal medicine and legislation

of the American Medical Association. The speaker brought out many fine points which of necessity govern public hospitals in determining the practitioners that shall and those that shall not use their facilities.

The session of the American Conference on Hospital Service, held on Wednesday morning, was presided over by the president of the conference, Dr. Harry E. Mock, Chicago, and the meeting was given over to a consideration of different aspects of convalescent care.

What Convalescent Care Committee Has Done

In opening the meeting Doctor Mock pointed out that convalescent beds, which could be maintained for approximately \$2 a day as against \$4.80 for average hospital ward beds, offer the best solution for reduction of the high cost of hospital care and at the same time allow complete rehabilitation of the disabled. Four-fifths of the convalescent care now provided is for women and children, he said, and men and boys are overlooked in this respect. Only one bed for every 10,000 persons in the United States is available, he said, and one for every 1,200 is needed.

Dr. E. H. Lewinski Corwin, Chicago, made a report on the work done by the committee on convalescent care, of which he is chairman. Data gathered by means of a questionnaire were analyzed, convalescent homes being classified in three groups for this purpose: those in which no charge is made; those in which part-pay or a nominal charge is accepted; proprietary institutions, with maximum charges of not more than \$30 to \$40 a week.

On Wednesday afternoon a joint session of the American Conference on Hospital Service and the council on physical therapy of the American Medical Association was held, with Dr. Merritte W. Ireland, surgeon general, U. S. Army, in the chair. "Rehabilitation and Convalescent Care" was discussed by Dr. E. H. Lewinski Corwin; "Physical Therapy in Teaching Hospitals" by Dr. Charles O. Molander, Michael Reese Hospital, Chicago, and "Occupational Therapy" by Dr. William R. Dunton, Jr., Harlem Lodge, Catonsville, Md. Following these papers there was a general discussion of these topics.

FAULTLESS EXPANSION SOCKET

*The New Faultless
Caster Hospital Catalog
contains valuable in-
formation for hospitals
and lists the various
lines designed exclu-
sively for hospital and
institution use. A copy
should be in your files.
One will be sent with-
out obligation.*



Casters that stay in metal furniture—everywhere—all the time—regardless of vibration, strain, use or abuse. Faultless Casters, equipped with the New Faultless Expansion Socket, can only come out of your furniture when you take them out. Easy to install—easy to remove—they carry your precious burdens smoothly and quietly, eliminating for all time the trouble of loose casters. Faultless Casters can be had in either pivot bearing or ball bearing style, as desired, finished in cadmium or nickel. The Faultless Ruberex, Protex and Rubber Tired Wheel can be furnished as required in various sizes up to and including 5 in. in diameter. It will pay you to investigate the extraordinary features of Faultless Casters equipped with the New Faultless Expansion Socket.

FAULTLESS CASTER COMPANY
EVANSVILLE INDIANA

New York Los Angeles Chicago Grand Rapids High Point
Canadian Factory: Stratford, Ontario

NOELTING

FAULTLESS • CASTERS

MAKERS OF QUALITY CASTERS SINCE 1899



Slip the Socket into the leg of the furniture—turn the base of the socket. The spring expands, wedging the socket tightly into the furniture. No jarring or vibration can loosen its tenacious hold. Finished in cadmium or nickel. Equipped with Ruberex, Protex and Rubber Tired Wheel—ball bearing or pivot bearing as desired.

NEWS OF THE MONTH



Methodist Homes and Hospitals Meeting Is Well Attended

An excellent representation from all over the country attended the thirteenth annual convention of the National Methodist Hospitals, Homes and Deaconess Association at the Congress Hotel, Chicago, February 17 to 19. The association banquet was held on the evening of the second day, with Bishop Edwin H. Hughes, Chicago, as the speaker.

The program opened Tuesday morning, February 17, with Dr. C. Lloyd Strecker, Methodist Home for Aged, Cincinnati, president of the association, in the chair. Devotions by Dr. E. D. Kohlstedt, secretary, Board of Home Missions and Church Extension, were followed by addresses by Dr. A. E. Kirk, Chicago, and Doctor Strecker. Guy M. Hanner, superintendent, Beth-El Hospital, Colorado Springs, Colo., presented the secretary's report, and Dr. Bascom Robbins, executive secretary, Bethesda Hospital, Kansas City, Kan., the treasurer's report.

The Tuesday evening program included devotionals by Dr. Charles Fox Davis, Minneapolis; music by the chorus of Wesley Memorial Hospital, Chicago; addresses by Lillian Watkins and Dr. S. W. Corcoran, Pittsburgh, and a pictorial representation of philanthropic and deaconess work by Dr. N. E. Davis, Columbus, Ohio.

The larger part of the Wednesday morning session was devoted to a symposium on hospitals, church homes, deaconess work and homes for children. Leaders of the discussions included Dr. John G. Benson, superintendent, White Cross Hospital, Columbus, Ohio; Mary Grant, Milwaukee; Dr. A. Z. Mann, Evanston, Ill.; Dr. E. S. Keller, Worthington, Ohio. Luella M. Eversizer presided and the main address was given by Dr. J. A. Diekmann, president, Bethesda Hospital, Cincinnati.

Doctor Diekmann Presides at Round Table

Doctor Diekmann presided at round table meetings on Tuesday and Wednesday. Topics and speakers were as follows: "Trends in Schools of Nursing," Minnie Draher, Bethesda Hospital, Cincinnati, and Miss Green, Methodist Hospital, St. Joseph, Mo.; "Group Nursing," Guy M. Hanner

and Mabel Woods, superintendent, Methodist State Hospital, Mitchell, S. D.; "The Problem of Nurse Education Expense and How to Solve It," Dr. M. F. Steel, Methodist Hospital, Fort Wayne, Ind.; Dr. C. S. Woods, St. Luke's Hospital, Cleveland, and Mae Tompkins, superintendent, Methodist Hospital, Peoria, Ill.; "The Value of Scientific Dietetics in Hospital Life," Bertha E. Beecher, assistant director, Christ Hospital, Cincinnati, and Elizabeth Tuft, Wesley Memorial Hospital, Chicago; "Hospital Courtesies," E. S. Gilmore, Wesley Memorial Hospital, Chicago, Carolyn M. Fenby, superintendent, Methodist Hospital, Madison, Wis., and the Rev. J. M. Wingett, West Nebraska Methodist Episcopal Hospital, Scottsbluff, Neb.; "The Effect of Room and Color Arrangement on Patients," May Middleton, Methodist Hospital, Philadelphia, Blanche M. Fuller, Nebraska Methodist Hospital, Omaha, and Dr. M. R. Starbuck, Hays Protestant Hospital, Hays, Kan.; "Special Problems of the Small Hospital," Dr. W. B. Stevens, Grace Hospital, Hutchinson, Kan., Dr. W. M. Puffer, Bronson Methodist Hospital, Kalamazoo, Mich., Luella Cox, Methodist Hospital, Gary, Ind., and Nina M. Denver, Methodist Deaconess Hospital, Louisville, Ky.

Other topics discussed included: "Responsibilities of Members of the Hospital Board of Trustees"; "The Psychology of Securing Funds for Hospital Purposes"; "Correct Ratio of Hospital Personnel to Patients"; "The Hospital Social Service Nurse"; "Value of Publicity to the Hospital."

Nursing Leaders Heard at Central Council Institute

Both the morning and afternoon sessions of the Institute for Lay Boards of Hospitals and Public Health Nursing Organizations that were held in Chicago, Tuesday, February 17, were well attended. The institute was arranged by the Central Council for Nursing Education.

Mrs. Ernest E. Irons, Chicago, presided at the session on public health nursing. Mrs. Arthur H. Spiegel, chairman, joint committee on hourly nursing, gave a brief history of the hourly nursing



"**SEE
AMERICAN
FIRST**"

S. R. M. S.

SOUTH ROCKY MOUNTAIN STATES

Scenic grandeur and curiosities of nature . . . rich mineral deposits . . . vast agricultural possibilities, now being realized with irrigation. The South Rocky Mountain States are a majestic invitation to industry!

And "American" Alcohol has accepted this invitation, by locating plants nearby.

Plants:
Pekin, Ill.
Gretna, La.
Philadelphia, Pa.
Sausalito, Cal.

**AMERICAN
COMMERCIAL ALCOHOL
CORPORATION**

420 Lexington Avenue, New York, N. Y.

Solvents and Plasticizers manufactured by the KESSLER CHEMICAL CORPORATION a subsidiary of
AMERICAN COMMERCIAL ALCOHOL CORPORATION

Ethyl Acetate Butyl Acetate Nor. and Sec. Amyl Acetate Amyl Propionate Butyl Propionate Butyl Butyrate Ethyl Lactate
Butyl Alcohol, Sec. Amyl Alcohol Butyl Stearate Refined Fusel Oil Dimethyl Phthalate Diethyl Phthalate Diamyl Phthalate
Dibutyl Phthalate Dibutyl Tartrate Triacetone Special Solvents and Plasticizers

Odorless, Colorless "Everclear" Alcohol

PUT "Everclear" Alcohol to your severest test, for quality and purity. It will pass the test, for "Everclear" is manufactured with exceptionally high standards in mind.

"Everclear" Alcohol has no color or odor; it is sparklingly clear; it is **PURE**.



Reg. U. S. Pat. Off.

NEWS OF THE MONTH

service in Chicago, which is sponsored by the joint committee, and Miriam Ames, executive director, outlined plans for the future of the service. Sophie C. Nelson, president, National Organization for Public Health Nursing spoke on the scope of public health nursing in a community health program, and Dr. Carl E. Buck, executive officer, department of health, Detroit, spoke on the responsibility of the citizen for community health. Discussing the speeches were Dr. John M. Dodson, director, bureau of health and public instruction, American Medical Association, and Mrs. Carl H. Davis, board of directors, Visiting Nurse Association, Milwaukee.

Mrs. David Wilson Graham, Chicago, presided at the session on nursing education. Speakers and their topics included: Adda Eldredge, director of nursing education, state board of health for Wisconsin, Madison, "The Relation of the School of Nursing to the Board of Directors"; Dr. Henry Spencer Houghton, dean, State University of Iowa College of Medicine, Iowa City, "The State University and Nursing Education"; Isabel M. Stewart, director, Department of Nursing Education, Teachers College, Columbia University, New York City, "The Present Trend in Nursing Education." The discussion was led by Dr. R. C. Buerki, superintendent, Wisconsin General Hospital, Madison, and Anna D. Wolf, associate professor of nursing, University of Chicago.

An informal discussion of nursing problems was held at the luncheon at which M. Helena McMillan, director, school of nursing, Presbyterian Hospital, Chicago, presided. Those in attendance at the institute were present at the dinner given by the Council of Medical Education and Hospitals, American Medical Association, and the Central Council for Nursing Education on Monday evening.

Presbyterian Hospital Sponsors a "Students' Night"

A most successful "students' night" was held under the auspices of the Presbyterian Hospital, Chicago, at the Third Presbyterian Church, Sunday evening, February 15, with Asa S. Bacon, superintendent, Presbyterian Hospital, presiding.

Student nurses from many of Chicago's hospitals were present and the church was filled with their friends.

The speaker of the evening was Dr. Lewis A. Sexton, superintendent, Hartford Hospital, Hartford, Conn., and president of the American Hospital Association. Group singing was furnished by the glee club of St. Luke's Hospital, Chicago, as well as by the combined choirs of the Third Presbyterian Church and St. John's Presbyterian Church.

Among those present on the rostrum besides Doctor Sexton and Mr. Bacon were Paul Fesler, superintendent of the University of Minnesota Hospitals, president-elect of the American Hospital Association; John A. McNamara, executive editor, *THE MODERN HOSPITAL*; the Rev. Alvyn Ross Hickman, pastor of the Third Presbyterian Church, and the Rev. Pasquale DeCosta, pastor of St. John's Presbyterian Church.

Second Saunders Memorial Award to Be Presented in May

The second award of the Walter Burns Saunders Memorial Medal will be presented in May to a graduate nurse for distinguished service in nursing. The medal is given by W. L. Saunders II, Philadelphia, in memory of his father. The first medal was awarded posthumously last year to S. Lillian Clayton, former president, American Nurses' Association.

The recipient of the award is to be a nurse who has made to the profession or to the public some outstanding contribution, either in personal service or in the discovery of some nursing technique, which may be to the advantage of the patient and to the profession. The only kind of service in which the contestants may not be engaged is that of writing.

Members of the committee on award are: Elnora E. Thomson, president, American Nurses' Association; Elizabeth C. Burgess, president, National League of Nursing Education; Sophie C. Nelson, president, National Organization for Public Health Nursing, and W. L. Saunders II, donor of the medal.

Maintaining Hospital Efficiency



No part of a hospital's equipment is more vital than waste disposal. Breakdowns are costly—and dangerous.

Thus it is significant that the principal manufacturers of sterilizing equipment use Sloan Flush Valves: it is noteworthy that the vast majority of the nation's finest hospitals are Sloan-equipped.

These facts are important—but not surprising. For twenty-five years Sloan has manufactured the quality products of the flush valve industry. Small wonder, then, that today Sloan Flush Valves are the first choice of hospital authorities and the standard of comparison by which all others are judged.

Sloan ROYAL and Sloan STAR Flush Valves are made for every hospital requirement, including closets, bidets, urinals, slop sinks, bed pan washers and sterilizers

SLOAN VALVE CO · CHICAGO

Manufacturers of Flush Valves Exclusively for Every Requirement

NEWS OF THE MONTH

Coming Meetings

American Hospital Association.

President, Dr. L. A. Sexton, Hartford Hospital, Hartford, Conn.

Executive secretary, Dr. Bert W. Caldwell, 18 East Division Street, Chicago.

Next meeting, Toronto, September 28 to October 2.

American Protestant Hospital Association.

President, Dr. B. A. Wilkes, Hollywood Hospital, Hollywood, Calif.

Executive secretary, Frank C. English, D.D., Hyde Park, Station O., Cincinnati.

Next meeting, Toronto, September 25-28.

Hospital Association of the State of Illinois.

President, E. E. Sanders, Ravenswood Hospital, Chicago.

Secretary, E. I. Erickson, Augustana Hospital, Chicago.

Next meeting, Chicago, May 13-15.

Indiana Hospital Association.

President, Dr. William A. Doeppers, Indianapolis City Hospital, Indianapolis.

Secretary, Gladys Brandt, Cass County Hospital, Logansport.

Next meeting, Chicago, May 13-15.

International Hospital Congress.

Secretary general, Dr. E. H. Lewinski Corwin, 2 East 103rd St., New York City.

Next meeting, Vienna, June 8-14.

Iowa Hospital Association.

President, Robert E. Neff, University Hospital, Iowa City.

Secretary, Clinton F. Smith, Allen Memorial Hospital, Waterloo.

Next meeting, Cedar Rapids, March 11-12.

Midwest Hospital Association.

President, Rev. L. M. Riley, Wesley Hospital, Wichita, Kan.

Executive secretary, Walter J. Grolton, Missouri Pacific Hospital, St. Louis.

Next meeting, St. Louis, April 17-18.

Minnesota Hospital Association.

President, Paul H. Fesler, University Hospital, Minneapolis.

Secretary-treasurer, James McNee, St. Luke's Hospital, Duluth.

Next meeting, Duluth, June 22, and Lutsen, June 23-24.

National League of Nursing Education.

President, Elizabeth C. Burgess, Teachers College, Columbia University, New York City.

Executive secretary, Nina D. Gage, 370 Seventh Ave., New York City.

Next meeting, Atlanta, Ga., May 4-9.

New Jersey Hospital Association.

President, Dr. Earl H. Snavelly, Newark City Hospital, Newark.

Executive secretary, Charles F. Dwyer, Newark City Hospital, Newark.

Next meeting, Atlantic City, May 7-8.

Hospital Association of the State of New York.

President, Sheldon L. Butler, Long Island College Hospital, Brooklyn.

Secretary, Boris Fingerhood, United Israel-Zion Hospital, Brooklyn.

Next meeting, Syracuse, May 8-9.

North Carolina Hospital Association.

President, Dr. L. V. Grady, Carolina General Hospital, Wilson.

Secretary, Edwin G. Farmer, Carolina General Hospital, Wilson.

Next meeting, Durham, May 19-21.

Ohio Hospital Association.

President, Frank W. Hoover, Elyria Memorial Hospital, Elyria.

Executive secretary, John R. Mannix, University Hospitals, Cleveland.

Next meeting, Cleveland, April 28-29.

Hospital Association of Pennsylvania.

President, William M. Breiting, Reading Hospital, Reading.

Secretary, Howard E. Bishop, Robert Packer Hospital, Sayre.

Next meeting, Philadelphia, March 24-26.

Tennessee Hospital Association.

President, Dr. Henry Hedden, Methodist Hospital, Memphis.

Secretary, Dr. Eugene B. Elder, Knoxville General Hospital, Knoxville.

Next meeting, Knoxville, April 6.

Texas State Hospital Association.

President, Dr. Lucius R. Wilson, John Sealy Hospital, Galveston.

Executive secretary, Joe F. Miller, Jefferson Davis Hospital, Houston.

Next meeting, Galveston, March 14.

Western Hospital Association.

President, G. W. Olson, California Hospital, Los Angeles.

Secretary, Grace Phelps, Doernbacher Memorial Hospital, Portland, Ore.

Next meeting, Oakland, Calif., April 22-23.

Wisconsin Hospital Association.

President, Dr. R. C. Buerki, State of Wisconsin General Hospital, Madison.

Secretary, L. C. Austin, Mt. Sinai Hospital, Milwaukee.

Next meeting, Chicago, May 13-15.

\$ 6 , 2 4 0
a year saved in
floor scrubbing
labor

• That's just what one building in Niagara Falls, New York, saved in one year—\$6,240—when they introduced modern methods in their floor maintenance system.

• If you want to cut down maintenance expense and at the same time preserve the beauty and life of your floors, send the coupon below for our new Central Chart. It is absolutely free and obligates you in no way.

• This Control Chart will serve as a complete guide for your janitor in his regular floor maintenance schedule. It will be brought to you by a Johnson Floor Maintenance Engineer who will make an intelligent study of your floors—analyzing your floor problems in detail. He will then put down his findings on the chart as a permanent record with recommendations for the most economical and successful treatment of each floor.

• Mail coupon for the new Control Chart for the care of floors,

by S. C. JOHNSON & SON



S. C. JOHNSON & SON, Dept. MHS. RACINE, WISCONSIN • Without cost or obligation please have your Floor Maintenance Engineer bring us your new Johnson Control Chart.

Name _____

Address _____

City _____ State _____

PERSONALS



ANNA KERSTING is the newly appointed superintendent, Poplar Bluff Hospital, Poplar Bluff, Mo.

JEWELL LOVELACE has been named superintendent, Dr. J. C. McLean Hospital and Clinic, Pampa, Tex.

B. B. HOLLER has been named business manager, Chambersburg Hospital, Chambersburg, Pa., following the resignation of T. C. McDOWELL, superintendent.

FLORENCE A. HYDE is the new superintendent, Herkimer Memorial Hospital, Herkimer, N. Y., succeeding CLARA M. NEARY, who died recently. MRS. HYDE has been surgical nurse at the hospital for the last five years.

CELIA HERCKT is superintendent, Kennelworth Hospital, Clarinda, Iowa.

BERTHA M. HALL is the newly elected superintendent of the Owen Sound General and Marine Hospital, Owen Sound, Ontario. MISS HALL was for five years superintendent of the Kitchener-Waterloo Hospital, Kitchener, Ontario.

SISTER M. ROCHUS has recently been named superintendent, Georgetown University Hospital, Washington, D. C., after having been connected with the hospital for the last four years.

DR. ISABEL GARNETT BUTLER is the superintendent of the new Evanston Community Hospital, Evanston, Ill., which was dedicated recently to the use of Negro residents of Evanston and neighboring districts.

FLORENCE E. PARSONS, formerly superintendent R. G. Patterson Memorial Hospital, Belleville, Kan., is the new head of the Donahue Memorial Hospital, Syracuse, Kan.

DR. FRANCIS J. EISENMAN, for the last few months acting superintendent, Garfield Hospital, Washington, D. C., has recently been appointed superintendent. DOCTOR EISENMAN succeeds COL. D. C. HOWARD who resigned last summer.

MIRIAM AMES has been elected executive director, Hourly Nursing Service, Chicago, Ill., sponsored by the Joint Committee on Hourly Nursing. She assumed the position January 1.

FRANK CARBERRY, superintendent, Columbus Hospital, New York City, died recently of injuries received when he was struck by an automobile.

DR. BERNARD T. MCGHIE, superintendent, Ontario Hospital for the Feeble-minded, Orillia, and director of mental clinics for the province, was recently appointed director of hospitals for Ontario, a newly created position.

AILEEN BROWN, Fayetteville, Tenn., has been appointed superintendent, Lincoln Hospital, Stanford, Ky.

DR. HENRY A. COTTON, medical director, New Jersey State Hospital, Trenton, for the last twenty-three years, has retired and DR. ROBERT G. STONE, assistant medical director, has been named to succeed him. DOCTOR COTTON has been appointed medical director emeritus and director of research.

DR. ETHEL M. LAYBOURNE, formerly superintendent, Methodist Hospital, Freeport, Ill., is now in charge of Women's and Children's Hospital, Chicago.

DR. J. BELMONT WOODSON has been elected superintendent and medical director of the Piedmont Sanatorium, Burkeville, Va., the state aided institution for Negroes who are threatened with or suffering from tuberculosis. DOCTOR WOODSON succeeds DR. W. H. VENABLE, who resigned last fall.

DEANE FERGUSON has recently been appointed superintendent, Wells County Hospital, Bluffton, Ind. Prior to her election to the superintendency, MRS. FERGUSON was floor supervisor at the hospital.

RUTH E. GREGSON is the recently appointed superintendent of the Jordan Hospital, Plymouth, Mass.

Armour's

Surgical Ligatures

YOU CAN DEPEND ON THEIR EVEN ABSORPTION



UNIFORM composition of the strands and even absorption of the ligature into the living tissue are assured in Armour's Surgical Ligatures. Only the smooth or detached portion of the small intestines is used. A prodigious amount of animals slaughtered in the Armour abattoirs allows a selection of the best-suited gut from Government-inspected sheep. It is never frozen, never salted—processing and sterilizing start immediately as it comes from the killing floor.

Because of the Armour facilities and experience, fine surgical ligatures are spun, dried, and polished for you, and handled under modern scientific methods. They are sealed in sterilized tubes, dependably smooth and strong. Send for samples.

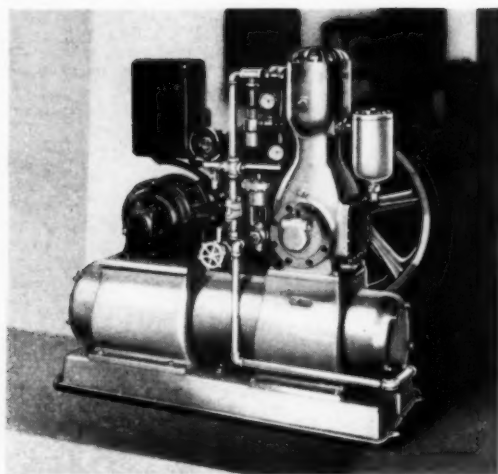
When the need is organotherapeutic products, Concentrated Liver Extract, Pituitary Liquid, Suprarenalin Solution, you will find those

bearing the Armour label always dependable. Because of the same facilities and care in preparation, these products are always of maximum and unvarying potency.

ARMOUR AND COMPANY
Chicago



Armour's Surgical Ligatures are supplied as follows: Plain and chromic, boilable and non-boilable, Regular (60-inch) lengths, sizes 000, 00, 0, 1, 2, 3, and 4. . . . Iodized, non-boilable, Regular (60-inch) lengths, sizes 00, 0, 1, 2, 3, and 4. . . . Plain and Chromic, boilable, Emergency (20-inch) lengths, sizes 000, 00, 1, 2, 3, and 4.



is it bunk...

this lowest cost of ownership talk?



In the purchase of electric refrigeration, "price" is only *temporarily* important; "cost of ownership" is *permanently* important.

Is it bunk?

Consider! Keen, exacting, practical-minded purchasing agents for 10 great railroads and 20 large chain store organizations have recently chosen Lipman Electric Refrigeration because competitive test runs *proved* "cost of ownership" to be the vital factor—*proved* the Lipman to have the "lowest cost of ownership"! If refrigeration just as good were obtainable at a lower cost, Lipman would not have been chosen!

Do you know the facts about Lipman? You can't judge fairly until you do. A valuable booklet of refrigeration facts, containing complete information about the Lipman, is yours for the asking. Just fill in the coupon below—your request obligates you in no way.



GENERAL REFRIGERATION SALES COMPANY

903 Shirland Avenue, Beloit, Wisconsin.

Without obligating me in any way, please send me the Lipman book of refrigeration facts

Name

Address

Hospital Exhibitors' Association Drafts Business Code

Members of the Hospital Exhibitors' Association have drawn up the following business code, which crystallizes their aims and ideals, to guide them in their dealings with the field.

"In the belief that the first aim of most hospitals is a beneficent service to mankind without hope of reward or profit other than the reasonable expectation of appreciation and approval for work well done, we, the members of this association, hereby pledge ourselves to a comparative professional ideal, and in our relations with hospitals and among ourselves agree to adhere to the business practices outlined in the following standards in order to contribute our share to the development of hospital service. All members of the H. E. A. will observe this code:

"To work for truth and honesty in our relations with the hospital field and to refrain from promising service which we know it will be impossible to render.

"To strive to create confidence in our organization by deserving it and to avoid the use of competitive methods which might be considered questionable or unfair.

"To exert our efforts toward proving the quality of our own products rather than devoting attention to those of our competitors.

"To strive to conduct our business relations on a fair and honorable basis at all times and not attempt to oversell or overload hospitals beyond their legitimate needs.

"To exchange our products, service and ideas at a price in keeping with a legitimate profit and in such a way as to benefit both parties to the transaction.

"To maintain a friendly contact with fellow members of the Hospital Exhibitors' Association by promoting a frank exchange of ideas involving mutual interests.

"To cooperate with the hospital associations and other agencies in their effort to disseminate useful and practical knowledge to our mutual benefits.

"To put forth every effort, consistent with faithful business performance, in order that we and our field representatives may follow sound, recognized practices of constructive salesmanship.

"To adjust claims and settle disputes on the basis of facts and in fairness, resorting to other measures only when all such courses prove ineffective.

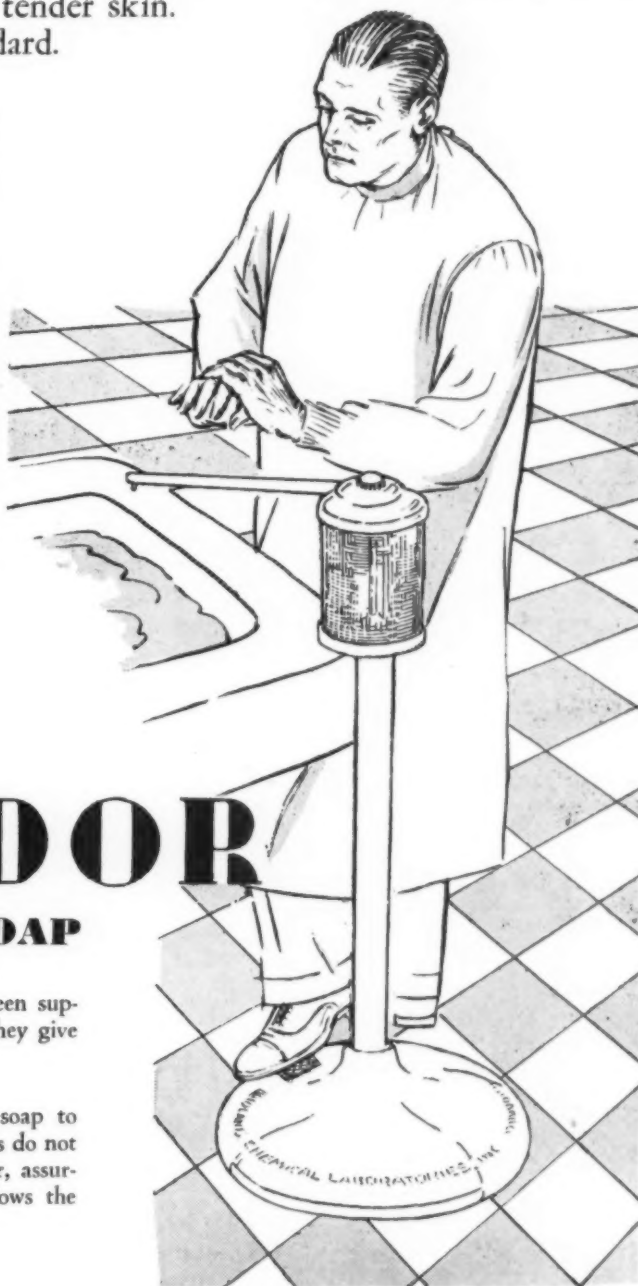
"We believe that a faithful observance of these standards will result in mutual respect among ourselves and in a general acceptance of our good intentions and high ideals of service by all hospital people."



THE FINEST SOAP SERVED IN THE MOST CONVENIENT DISPENSER

NOTHING but the highest grade raw materials are ever used in this specially made hospital product. Careful manufacture, plus aging, makes this soap mild and soothing to tender skin. Always uniform and up to standard.

Lohador Hospital Liquid soap is highly concentrated, extra heavy. It may be reduced with soft water and still retain its high soap content. Lohador is the most economical soap that can be used in a hospital—every particle is used up, no waste, no muss or insanitary conditions to combat. Lohador Hospital Liquid Soap is a rapid and thorough cleanser, giving an instant and copious lather of creamy texture. Prominent hospitals throughout the country, after comparison, are standardizing on



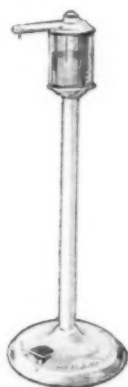
LOHADOR

HOSPITAL LIQUID SOAP

For twenty-five years, these laboratories have been supplying hospitals with their sanitary supplies. They give their endorsement through continued use.

The latest improved means of serving liquid soap to hospital users is this foot pedal dispenser. Hands do not come in contact with any part of the dispenser, assuring absolute cleanliness. Swivel-action bowl allows the supply arm to be moved in any direction.

**MIDLAND CHEMICAL
LABORATORIES, INC.
DUBUQUE IOWA**



MAIL THIS COUPON

MIDLAND CHEMICAL LABORATORIES, INC.
Dubuque, Iowa

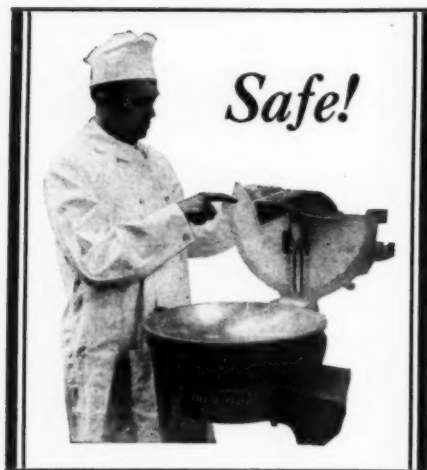
Gentlemen:

Please send me ☐ Sample Lohador Hospital Liquid Soap.
☐ Details of plan to obtain a Lohador Foot
Pedal Soap Dispenser Free.

Hospital

Name City State

Exclusive
Safety Features
of the IMPROVED
"BUFFALO"
Food Chopper



NOTE in the above illustration how the knives in the "BUFFALO" are fully guarded, offering 100% SAFETY at all times.

In these improved models, the knives can be stopped while the bowl continues to revolve, giving complete control over food being chopped, and making it absolutely SAFE when removing food from the bowl. An EXCLUSIVE "BUFFALO" Feature!

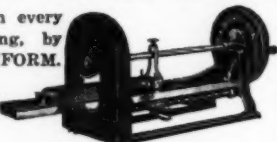
Better quality chopped foods can be produced at substantial savings in time, labor and food in this improved machine.

*4 sizes—in 6 models—for every kitchen,
from the largest to the smallest.*

"BUFFALO" Bread Slicer

Saves 5 to 6 slices on every loaf, over hand slicing, by cutting every slice UNIFORM.

Cuts hot or cold bread.
2 sizes—for hand or motor.



JOHN E. SMITH'S SONS CO.

50 Broadway

Buffalo, N. Y.

Special Sessions to Feature Pennsylvania Program

Hospital leaders from all parts of Pennsylvania are making their plans to attend the annual meeting of the Hospital Association of Pennsylvania to be held in Philadelphia, March 24 to 26. All phases of hospital activity will be discussed in speeches and at round table sessions. Of especial interest will be the exhibits, for the inspection of which a regular time on each program has been set aside.

The first session of the three-day program will be held on Tuesday afternoon, March 24, with W. M. Breiting, superintendent, Reading Hospital, Reading, and president of the association, in the chair. The invocation will be given by Dr. George W. Reese, superintendent, Shamokin State Hospital, Shamokin, Pa., and the main address of the afternoon will be given by Dr. Wilmer Krusen, president, Philadelphia College of Pharmacy. Doctor Krusen's topic will be, "Present Day Problems in Hospital Affairs." The rest of the afternoon will be devoted to visiting the Women's Medical College and Hospital or the Pennsylvania Lying-in Hospital, and other points of interest.

W. S. Kohlhaas, vice-president of the association, will preside at the Wednesday morning session. Mr. Breiting will present the president's address, which will be followed by reports of officers and of committees. John M. Smith, director, Hahnemann Hospital, Philadelphia, will conduct a round table.

Trustees Will Have Special Session

William Shand, president, Lancaster General Hospital, will preside at the Wednesday afternoon session, which has been designated "The Trustees' Session." Addresses will be given by Francis A. Hall, president, board of directors, Harrisburg Hospital, Harrisburg, and Fred B. Gerner, president, board of trustees, Allentown. Following these addresses, Dr. Bert W. Caldwell, executive secretary, American Hospital Association, Chicago, will lead a discussion.

The association dinner will be held on Wednesday evening with Dr. W. Warren Giles, of the First Reformed Church, East Orange, N. J., as the speaker of the evening.

The meeting on Thursday morning will be known as "The Doctors' Session," and will be presided over by Dr. William Hillegas, board of medical education and licensure for Pennsylvania. Speakers will include Dr. W. Estel Lee, professor of surgery, University of Pennsylvania, and Dr. Donald Guthrie, surgeon-in-chief, the Robert Packer Hospital, Sayre. Dr. Malcom T. MacEachern, director of hospital activities, American College of Sur-

When You Consider the New Hospital, Consider Those Men and Women Who Must Run It Efficiently



EQUALLY important to the care and study you take in the planning of the new hospital or addition is the selection of personnel. Modern and efficient hospitalization is no less dependent on the human equation than it is on the finest of equipment. Competent technicians and employees spell success just as do the most advanced scientific apparatus and the most cheerful furnishings.

Even when the new building is in progress should you consider this vital problem of an intelligent and experienced staff. Thereby may you anticipate and assure a smooth-running and coordinated institution the moment its doors are opened to the public.

The Medical Bureau of Chicago is at all times willing to offer counsel to hospital officials. All personnel needs—supervisors, department heads, nurses, dietitians, laboratory workers—can here be met among a group of men and women whose capabilities and background records have qualified them to assume all responsibilities placed upon them.

Write us when you need assistance. Let us prepare a list of candidates and "equip" your hospital, so to speak, to function with all the understanding of service that has been in mind since the preparation of the first elevation drawings and blue prints.

THE MEDICAL BUREAU

1541, PITTSFIELD BUILDING
55 EAST WASHINGTON STREET
CHICAGO



FRESH Orange Juice at lowest cost per glass



**Sunkist De Luxe
Electric Extractor**

Halve an orange; zip . . . zip—and all the juice is in the glass in the easiest, fastest way. Your choice of lustrous GREEN DUCO or CHROMIUM PLATE.

Sold WITHOUT PROFIT to Sunkist—as a service to you.

For health, orange juice must be fresh

THE Sunkist Electric Extractor is sold as a service, WITHOUT PROFIT TO US. It saves its cost in a short time because it gets more juice—one-fourth more than most methods. Buy oranges by the box and you'll find the cost per glass exceedingly low.

In hospitals, particularly, it is important that orange and lemon juice be *freshly* extracted from sound fruit. Juice which has stood for even thirty minutes begins to oxidize and has already lost some of its healthful vitamin properties. Ready-made or bulk "juice," *uncertain in origin*, is not the same as *fresh* juice. Mail coupon for full information.

Sunkist Fruit Juice Extractor

CALIFORNIA FRUIT GROWERS EXCHANGE

Div. D Sr.-13, Department of Fresh Fruit Drinks
900 North Franklin Street, Chicago, Ill.

Please send full information regarding Sunkist Electric Extractors.


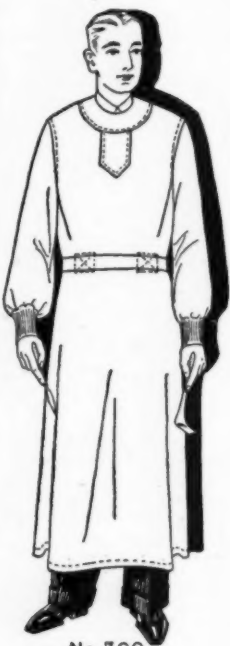

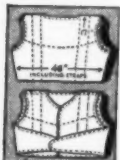
Hospital _____

By _____

Address _____

City _____

Just What You Want When You Want It!

 No. 901		 No. 317
 No. 408	 No. 309	 No. 403
 No. 406		 No. 405
 No. 304		 No. 315
 No. 729		 No. 608
		 No. 601

APRONS. BIBS. COLLARS. CUFFS. CAPS
UNIFORMS. BINDERS. BATH ROBES. PATIENTS' GOWNS
SURGICAL GOWNS. INTERNES' SUITS. MAIDS' UNIFORMS

Your own special styles can be duplicated
Samples and estimates promptly furnished on request
A complete new catalogue now ready

NEITZEL
NEITZEL MFG. CO. INC. WATERFORD, N.Y.

SPECIALISTS IN
NURSES' APPAREL AND HOSPITAL GARMENTS

geons, Chicago, will lead a round table following these addresses.

"The Nurses' Session" will be held on Thursday afternoon, with Marie C. Eden, directress of nurses, Presbyterian Hospital, Philadelphia, presiding. Included on this program will be addresses by Esther J. Tinsley, president Pennsylvania State Nurses' Association, Mary Roberts, editor, *American Journal of Nursing*, New York City, and a round table discussion led by Elizabeth Miller, secretary, state board of examiners for registration of nurses, Department of Public Instruction, Harrisburg, Pa.

A business session and the installation of officers will close the program.

Hospital Managers of Northwest Texas to Meet April 20-21

The third annual meeting of the Northwest Texas Clinic and Hospital Managers' Association will be held in San Angelo, Tex., April 20 and 21.

Rochester General Builds New Maternity Wing

A new \$180,000 maternity wing is now under construction at the Rochester General Hospital, Rochester, N. Y., and is expected to be ready for use by September 1.

The funds were raised in a drive by the institution during the week of December 6, 1929. The total amount raised was \$600,000, and from it there has already been constructed an out-patient building at a cost of \$200,000. A new children's department is now under construction and will be completed within a month. It will cost \$50,000.

New Addition to Double Capacity of Carlisle Hospital

The next few months will see the capacity of the Carlisle Hospital, Carlisle, Pa., practically doubled when the present building project, for which plans have been drawn, is completed. The estimated cost of the project is \$75,000.

Originally the Carlisle Hospital was intended as a fifty-bed institution, but because of the use of a number of the rooms for other purposes than the reception of patients, it has been a forty-bed hospital. With the new addition, the capacity will be increased to seventy-five or eighty beds.

For the last year the hospital has been running to capacity, and the addition was necessary.



Patient's rooms, University Hospital, Cleveland, Ohio—showing Goodyear Rubber Flooring

View of lobby, Private Pavilion, University Hospital, Cleveland, Ohio, laid with Goodyear Rubber Flooring; Coolidge, Shepley, Bullfinch & Abbott — Architects; flooring by Lamson Floors Company



Corridor, University Hospital, Cleveland, Ohio—quiet and sanitary Goodyear Rubber Flooring

RUBBER FLOORING

*aids work and beauty
of distinguished new hospital*

The high efficiency of Goodyear Rubber Flooring in medical service is shown in the recent complete installation of this resilient material in wards, halls, lobbies, laboratories, private rooms, of the new University Hospital, Cleveland. This distinguished hospital employs modern flooring handsome in appearance, helpful in hygiene.

Rubber Flooring gives definite aid in hospital routine. It is

famously quiet, immaculately clean. It is not easily scuffed by movable apparatus nor damaged by chemicals. It is easy under the feet of staff members. It is adaptable with polished beauty to all decorative requirements — supports rigid sanitation with pleasurable comfort, colors, and textures. The colors do not fade — may be extended with identical effects through new additions to buildings.


Goodyear RAY-RUBBER for lining X-Ray rooms has the resisting power of $\frac{1}{8}$ " lead sheeting. It has been adopted and is endorsed for great usefulness by leading hospitals.

For complete information of the help Rubber Flooring may be in the work of your hospital, just write to Goodyear, Akron, Ohio, or Los Angeles, California.

THE GREATEST NAME IN RUBBER

GOOD YEAR

RUBBER FLOORING



RUBON
Big Push
Mop

Dusts and cleans floors in a jiffy
Chemically treated heads—
removable and washable

Five Sizes: 18 inch, 24 inch, 36 inch, 42 inch,
48 inch widths.

Write for attractive prices.

**RUBON WOODFINISHING
& PRODUCTS CO.**

500-502-504 W. 7th St. Kansas City, Mo.



**TO
MAKE
PERFECT
COFFEE**

Serve Continental Coffee, scientifically brewed, in clean urns. Then you are sure of wonderful cup quality.

To satisfy yourself that it is all that we claim, order 30, 20, or 10 pounds. Use 10 per cent according to our "Rules for Making Good Coffee." If not entirely satisfied, return the balance and you will owe us nothing.


Continental Coffee Co.
IMPORTERS ROASTERS

"The Coffee with the Delicious Aroma"

371-375 W. Ontario St., Chicago, Ill.

U. S. to Build Hospital for Delinquents

A hospital for defective delinquents is to be built under Federal auspices to treat "all offenders against the United States who are in the actual custody of its officers or agents, and who at the time of their conviction or during their detention are or shall become insane, afflicted with an incurable or chronic degenerative disease, or so defective mentally or physically as to require special medical care and treatment not available in an existing Federal institution."

The hospital will have a capacity of 600 or 750 beds and is expected to relieve St. Elizabeth's Hospital of all of its criminal insane. It is hoped that the new institution will, in time, become the medical center for the whole Federal penal and correctional service.

Occupational Therapists Honor Two Physicians

Dr. Frank Billings, Chicago, and Dr. Goldwyn Howland, Toronto, Canada, were elected honorary life members of the American Occupational Therapy Association at a meeting of the board of management in Philadelphia, January 3. Dr. Joseph C. Doane, superintendent, Jewish Hospital, Philadelphia, presided at the meeting.

Doctor Billings and Doctor Howland were praised because of their valuable services in the development of modern methods in, and the wider use of, curative occupations for the sick and disabled.

Contagious Disease Hospital Opened at Saginaw

Saginaw County's new contagious disease hospital, Saginaw, Mich., erected at a cost of \$184,000, was opened for inspection recently and is now receiving patients. The hospital has a nominal capacity of seventy-six patients, but if necessary it can accommodate from ninety to a hundred patients without undue crowding. The patients are cared for in one, two, four and five-bed rooms. All of the rooms are fully equipped with metal furniture and each has a lavatory and a bath.

The new hospital is of brick construction with stone trim. It is fire resistive throughout. It is built on an elevation and stands at a considerable distance from the highway with a curved concrete drive leading to it.

The Technical Advisor Suggests . . . "A Periodic Inventory of Processing Equipment"



SINCE an x-ray film can be developed but once, it is of utmost importance that efficient methods be used in a clean processing room.

Eastman Indirect Light-Boxes, Wratten Safelight Lamps and Safelights are essential for correct illumination. The Eastman X-ray Timer and Tank Thermometer are accurate aids in the control of development time and solution temperature. Eastman Developing Hangers hold films flat during development, fixation, washing, and drying.

A properly equipped processing room, using Eastman Prepared Processing Powders, will produce the highest quality radiographs economically with *Diaphax*, the radically improved Eastman X-ray Film, which has greater sensitivity and affords new ease in viewing.

In order to be certain of consistently uniform results, an inventory of all equipment should be made periodically. The Technical Advisor in your locality will be glad to make such a check. Mail the coupon below.

For a quarter hour of stimulating entertainment, tune in on "Devils, Drugs, and Doctors," broadcast each Sunday evening at 8 o'clock E. S. T., over a coast-to-coast network of the Columbia System.

These talks, sponsored by Eastman Kodak Company, are given by Dr. Howard W. Haggard, Associate Professor of Physiology, Yale University.

Eastman Kodak Company, Medical Division
343 State Street, Rochester, N. Y.

Gentlemen:

Kindly have the Eastman Technical Advisor in this locality call at his earliest convenience to discuss some of our processing room problems.

Name

Institution

Number and Street

City and State

REDUCE THE COST OF CHINA REPLACEMENT



BREAKAGE—source of considerable loss each year—leads many hospital superintendents to make their policy—

“Serve It in Silver”

Silver does not crack, chip or break. It lasts for years. It holds heat. It “tones” up the tray. It adds an appetizing attraction that helps make the food more acceptable. Over a period of years, it pays for itself and saves money otherwise spent for replacement. It is a true economy.

For these reasons, many hospitals use Benedict Indestructo Silver. Indestructo is ideally suited to hospital service. Its quality is reliable. Its plain surfaces are easy to keep clean. Its heavy silver plate can be counted upon to effect the true economy of long wear. Yet it is moderately priced because it is made in large quantities. *Send for catalog.*

A New-Comer

Benedict Chromium Plate—with a brilliant, glass-hard surface, never tarnishes and never needs polishing. It keeps its bright, clean “newness” indefinitely. Write for catalog.

BENEDICT MANUFACTURING CO.
Dept. C, East Syracuse, N. Y.

**BENEDICT
INDESTRUCTO
SILVER**

An Improvement Over Cooling Coils

Space saving hydrothermal grids, recently perfected, represent an improvement over cooling coils in mechanical refrigerating systems, according to an announcement by the manufacturers.

In these grids maximum heat absorbing surface is obtained by means of steel fins with broad flanges that are forced upon a steel tube by hydraulic pressure. Because of the large area of these fins, it is claimed that the grids can be operated at temperatures only a few degrees below those desired



to be maintained in the refrigerator. As a result, they do not gather the accumulations of frost that collect on cooling coils.

Within the outer tube is a second tube and in the space between them is the refrigerant, spread out in a thin layer for efficient heat absorption from the large surface of the outer tube.

The refrigerant enters at one end of the tube and the heat laden gas escapes at the other end. In no case is the gas travel through the cooling element greater than the length of a single grid, even though a number of grids may be combined to form the cooling unit. Instead of following a coil, the heat laden gas flashes through these grids.

The grids are made in three sizes and in a number of lengths. From these standard grids, cooling units of any size and shape can be readily assembled with standard fittings and installed without special engineering.



*De Paul Hospital,
St. Louis, Mo.
Frick Refrigeration
throughout*

In More Than 100 Fine Hospitals—



REFRIGERATION

Supplies cold drinking water from the central plant. . . .cools any number of boxes and storage rooms, each to the desired temperature. . . .freezes ice and ice cream. . . .furnishes conditioned air. . . .keeps serums and laboratory specimens. . . .chills the mortuary vault. . . .gives, in short, a complete Refrigeration Service of the utmost value.

Ammonia and Carbon-dioxide Systems, in all types and sizes. Offices and stocks in principal cities, everywhere.

Frick Company
WAYNESBORO, PA., U.S.A.
ICE MACHINERY SUPERIOR SINCE 1882



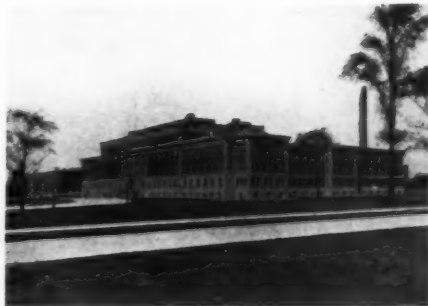
One of 11 Boxes Cooled by Frick Refrigeration at St. Luke's Hospital, Philadelphia



Type of Walk-in Box Equipped with Frick Refrigeration at the Frederick, Md., Hospital



St. Mary's, St. Louis



Youngstown, Ohio



U. S. Veterans, Memphis



About 390 A. D., Fabiola founded Rome's first general, public hospital. Others before her may have been known for their occasional charity but it was she who is first recorded as having made of nursing a vocation.

In an age when the poor and infirm were an object of scorn, she, the patrician, moved with a profound sympathy for suffering and poverty, daily sought out the sick, carried them to her hospital, herself, and there nursed the unhappy, emaciated victims of hunger and disease, dressed their wounds and bathed them with her own hands.

WILL ROSS, INC., WHOLESALE HOSPITAL SUPPLIES
779-783 No. Water St. Milwaukee, Wisconsin

Hydrothermal grids are strongly made, with the fins held rigidly in alignment by their broad flanges, which fit tightly on the outer tube. The ends of the tubes are welded and the entire grid is hot galvanized. The all steel construction prevents any possibility of electrolytic action between the parts and avoids any separation of the tube and fins with temperature changes, since all parts, being of the same metal, contract and expand equally.

These grids can be used with any ammonia or methyl chloride refrigerating system.

A Signal System That Embodies Many Improvements

A new nurses' signal system, recently perfected and placed upon the market, contains many attractive features that will be of interest and benefit to hospital administrators and architects. This system consists of the actual signaling of requirements from the patient to the nurse and is so ingeniously arranged that the nurse will be able to save half of her travel time in going to patients who have signaled.

The device has the usual pull cord but in place of the pull feature there is in the handle a button that when pushed by the patient lights up and various words alternately appear. For instance, at the top of the square block just above the push button will appear the word "Nurse." After this has been on for two or three seconds it is replaced by the word "Water" and then by "Bedpan," "Service" and other words. The word "Nurse" appears several times on the block, the theory being that in an emergency the services of the nurse are most often desired and it would be impractical to wait until the entire series of words has been run before the patient may call the nurse again.

When the patient has obtained the service he desires, he releases the push button and at that time the signal light, which is placed over the door of his room and protrudes, having two sides showing in the corridor, lights up with the word denoting the service desired. At the same time the room number and service light up at the nurse station. In this way the nurse on room duty can easily and readily see what the patient wants without first going to the room.

There are several other excellent features, such as the possible substitution of foreign language words when necessary, and small pictures of the service desired opposite the words so that both foreigners and illiterates can be served as efficiently as others. A flash system can also be arranged so that the superintendent may receive in his office a record of every signal sent by the patient.